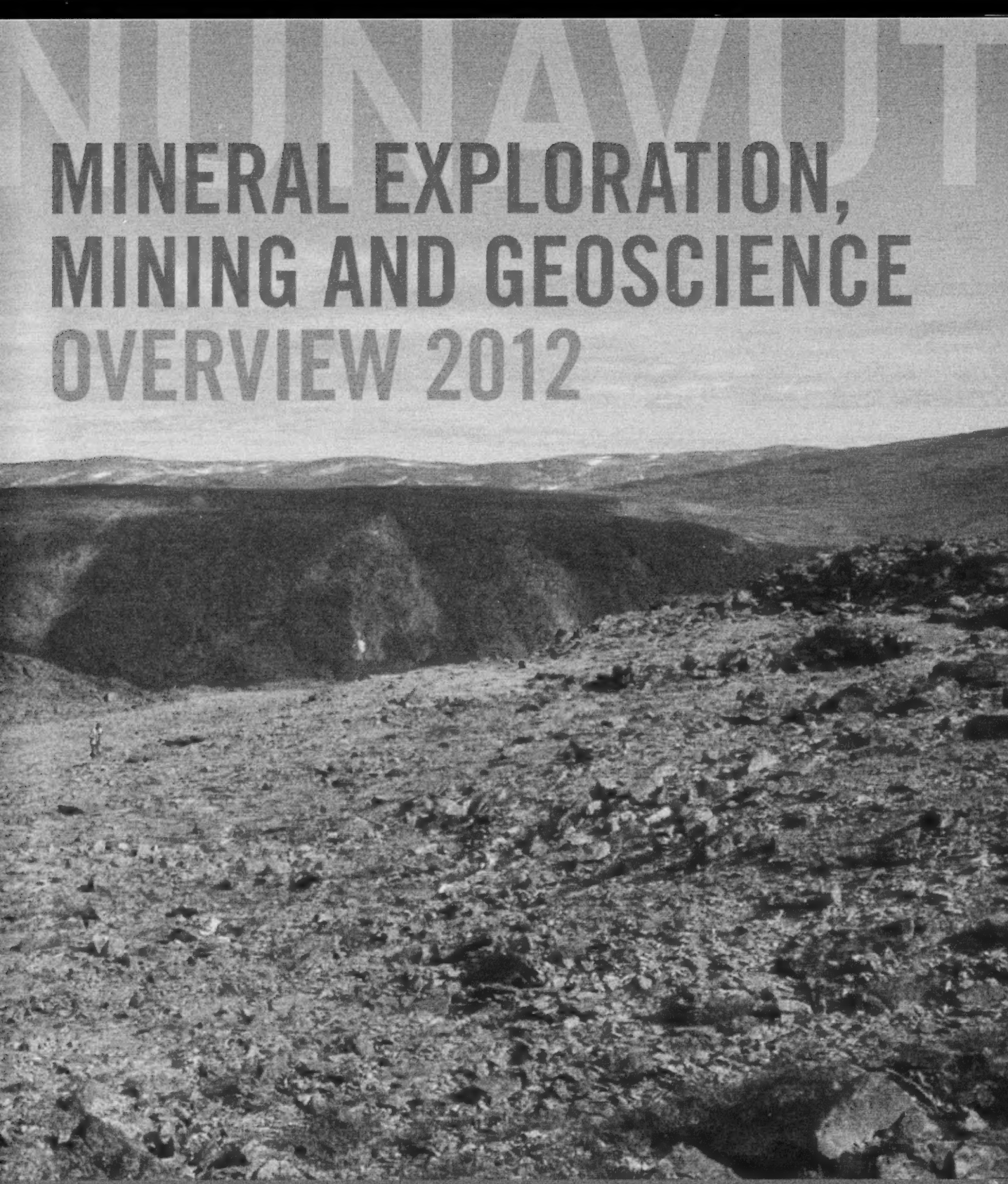
MINERAL EXPLORATION, MINING AND GEOSCIENCE OVERVIEW 2012



Nunavut

Aboriginal Affairs and Northern Development Canada

Affaires autochtones et Développement du Nord Canada

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Cover photo: An extensive gossan outcrop on the Hall Peninsula, Baffin Island; on the perimeter a geologist takes samples. Courtesy of AANDC.

ABOUT THE NUNAVUT MINING, MINERAL EXPLORATION AND GEOSCIENCE OVERVIEW 2012

This exploration overview is a combined effort of four partners: Aboriginal Affairs and Northern Development Canada (AANDC), Government of Nunavut (GN), Nunavut Tunngavik Incorporated (NTI) and Canada-Nunavut Geoscience Office (CNGO). The intent of this publication is to capture information on exploration and mining activities in 2012 and to make this information available to the public.

We thank the many contributors who submitted data and photos for this edition. Prospectors and mining companies are welcome to submit information on their programs for inclusion in the next Overview. Feedback and comments are appreciated.

NOTE TO READERS

This document has been prepared on the basis of information available at the time of writing. All resource and reserve figures quoted in this publication are derived from company news releases, websites and technical reports filed with SEDAR (www.sedar.com). Readers are directed to individual company websites for details on the reporting standards used. The authors make no warranty of any kind with respect to the content and accept no liability, either incidental, consequential, financial or otherwise, arising from the use of this document.

All exploration information was gathered prior to December 2012. All projects with active status in this publication completed and reported on exploration work during the 2011 or 2012 field season. Inactive projects did not report on exploration work during 2011 or 2012, but may have active mineral tenure as shown on SidViewer, and valid Land Use Permits and Water Licenses as issued by AANDC and the Nunavut Water Board, respectively.

With reference to the use of the term *National Instrument 43-101 (NI 43-101)*: This is an industry standard outlining rules and guidelines for reporting and disclosing scientific and technical information about mineral projects. This standard is supervised by the Canadian Securities Administrators.

ACKNOWLEDGEMENTS

The 2012 Exploration Overview was written by the Minerals Division at AANDC's Nunavut Regional Office (Matthew Senkow, Alia Bigio, and Paul Budkewitsch). Contributions were received from David Mate and colleagues at CNGO, Keith Morrison (NTI), Linda Ham and Eric Prosh (GN), and Elizabeth Kingston (NWT & Nunavut Chamber of Mines), with cartography by Tat Ma (AANDC).

LAND TENURE IN NUNAVUT

The territory of Nunavut was created in April 1999 as a result of the Nunavut Land Claims Agreement (NLCA), the largest Aboriginal land settlement in Canadian history. Spanning two million square kilometres (km^2), the territory has 25 communities and approximately 33,000 people. Inuit represent 85 per cent of Nunavut's population, creating the foundation of the territory's culture and values. This culture is inherently connected to the land, shaping government, business and day-to-day life.

In addition to the creation of the territory, the NLCA gave Inuit fee simple title to 356,000 km^2 of land. There are 944 parcels of Inuit Owned Lands (IOL) where Inuit hold surface title only (surface IOL). The Government of Canada or "the Crown" retains the mineral rights to these lands. Inuit also hold fee simple title, including mineral rights, to 150 parcels of IOL (subsurface IOL), which total 38,000 km^2 and represent approximately two per cent of the territory. Surface title to all IOL is held in each region by one of the three Regional Inuit Associations (RIAs) while title to subsurface IOL is held and administered by Nunavut Tunngavik Incorporated (NTI). NTI issues rights to explore and mine through its own mineral tenure regime. For both surface and subsurface IOL, access to the land must be obtained from the appropriate RIA.

The Crown administers mineral rights to 98 per cent of Nunavut. Aboriginal Affairs and Northern Development Canada (AANDC) manages these rights through the Northwest Territories and Nunavut Mining Regulations. Land use permits for activities on Crown land are issued by AANDC under the Territorial Land Use Regulations.

Significantly, the NLCA is a final settlement whereby all land claims in Nunavut have been settled with the Inuit of Nunavut, thus providing an unmatched level of land tenure certainty.

For more information on the location of IOL and Crown land in the territory, refer to the *Nunavut Mineral Exploration, Mining and Geoscience Active Projects 2012 Map.*

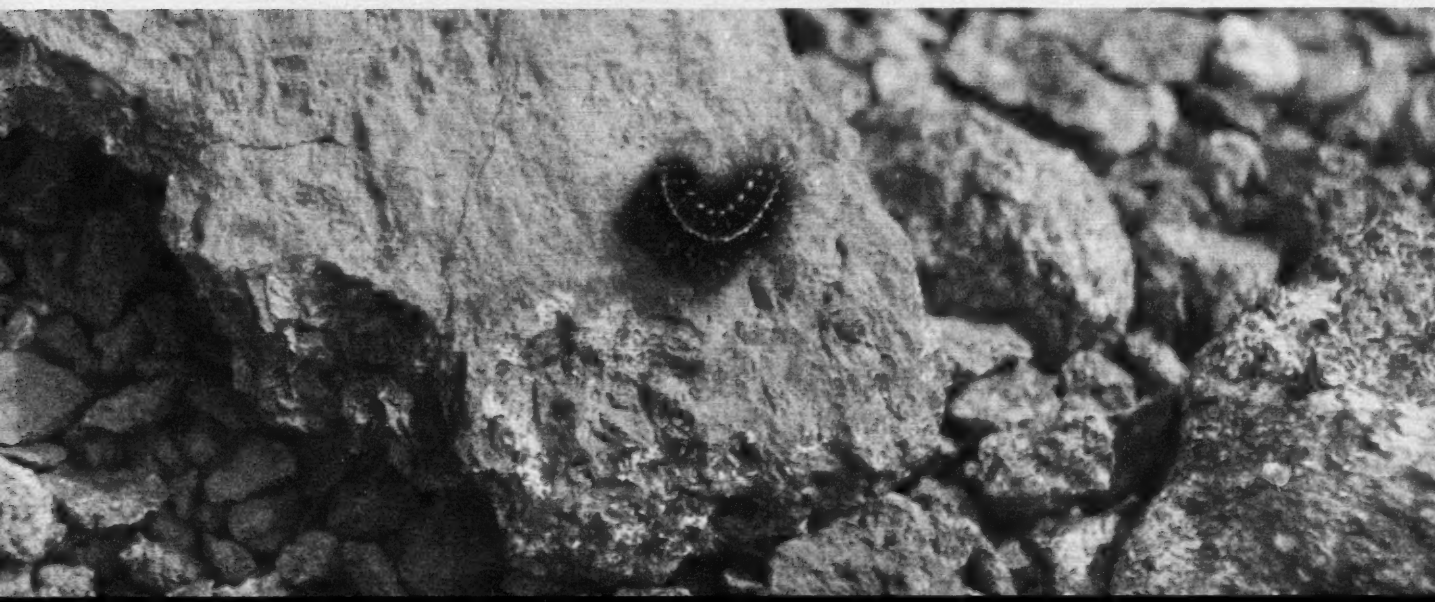
Mineral Tenure in Good Standing in Nunavut *Source: AANDC*

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Permits	343	464	1,875	2,267	1,395	1,057	1,041	394	477	314	259
Claims	6,008	7,560	10,138	9,644	6,707	7,905	8,088	7,613	7,178	6,777	6,066
Leases	270	263	271	332	352	354	479	590	631	567	627

Who is doing the work? *Source: Natural Resources Canada, October 2012*

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Juniors (Millions $)	31.7	48.5	107.9	132.5	161.8	237.4	261.4	56.9	125.0	163.0	154.7
Seniors (Millions $)	44.2	44.2	79.6	46.2	48.8	100.6	171.2	130.7	131.7	372.6	271.7

Arctic wooly bear caterpillar, Hall Peninsula
Courtesy of AANDC



Aboriginal Affairs and Northern Development Canada | Affaires autochtones et Développement du Nord Canada

December 3rd, 2012, was an important day for residents of Nunavut as Minster of Aboriginal Affairs and Northern Development, John Duncan approved of the Baffinland Mary River Project based on the recommendation of the Nunavut Impact Review Board.

The project will invest more than $4 billion for the construction of a road, railway, a deep-water port and mine site infrastructure and will employ an estimated 1,500 people for construction and a further 900 people during operation.

To that end, this project is a notable example of the importance of an effective and efficient regulatory regime in Nunavut. AANDC has been working with territorial partners with the goal of reducing duplication and creating a more modern, efficient and effective regulatory system. This important work includes the Nunavut Planning and Project Assessment Act.

The following are key features of the proposed Nunavut Planning and Project Assessment Act:

- detail and clarity in defining what types of activities constitute a project;
- improved efficiency with the Nunavut Planning Commission becoming the entry point into the review process for all project proposals in order to verify conformity with existing land use plans;
- greater predictability with timelines instituted at key decision points;
- a comprehensive enforcement scheme for land use plan requirements and environmental assessment processes; and
- enforceable project certificates at the conclusion of each review by the Nunavut Impact Review Board.

The existing Territorial Land Use Regulations and Territorial Quarrying Regulations in Nunavut are undergoing amendments to increase the duration of permit terms and to modernize language and technical reporting requirements. Amendments to the Territorial Land Use Regulations will allow more time for consultation on Class B land use permit applications while amendments to the Territorial Quarrying Regulations will include additional definitions of terms and metrification of Imperial units.

AANDC is also working to complete the modernization of the mineral tenure provisions of the Northwest Territories and Nunavut Mining Regulations with the goal of creating two sets of federal regulations: the "Northwest Territories Mining Regulations" and the "Nunavut Mining Regulations." This improvement process will include a final consultation on the full regulatory package in Canada Gazette I and an effective date projected to be January 2014.

The new Nunavut Mining Regulations will then be amended to enable the replacement of ground staking in Nunavut with online mineral claim selection. A first round of consultation on the Nunavut regulations occurred from September to November 2012. Stakeholder feedback is currently being compiled and implementation of online mineral claim selection is expected in early 2014.

In 2012, Aboriginal Affairs and Northern Development Canada completed several levels of public consultations on the proposed Nunavut Waters Regulations, including consultations with the general public, stakeholders, and other affected partners, including the Nunavut Water Board and Nunavut Tunngavik Incorporated. As required by the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, these proposed regulations have been developed to reflect the economic, operational, and administrative realities of Nunavut and to maintain high standards of environmental protection. It is expected the Nunavut Waters Regulations will come into force in the spring of 2013.

The Nunavut General Monitoring Plan Secretariat is hosted within the AANDC Nunavut Regional Office. The Nunavut General Monitoring Plan (NGMP) is an initiative that collects, analyzes, and reports information on the long-term conditions of Nunavut's environment, people, communities, and economy. It is overseen by a steering committee comprised of AANDC, on behalf of the Government of Canada, the Nunavut Planning Commission, Nunavut Tunngavik Incorporated, and the Government of Nunavut. Through targeted investments NGMP collects existing monitoring information, identifies gaps where monitoring needs to take place, and will provide reports to increase public access to ecosystemic and socioeconomic information. These efforts will support the ongoing development of Nunavut by providing decision-makers with increased access to meaningful information on the state and health of the territory.

Exploration and development in Nunavut was healthy in 2012, and AANDC continued its role as an advocate for sustainable mineral development in the territory. It does this through its land administration, water management, environmental management, mineral development, field operations, and socioeconomic monitoring responsibilities.

OUR WORK BY THE NUMBERS

In 2012, in the Nunavut region, AANDC has:

- Issued 109 prospecting permits, bringing the total number of existing prospecting permits in the territory to 259.
- Issued 308 mineral claims (as of November 1, 2012), 10 coal licenses and no mineral leases.
- Issued 14 Land Use Permits and granted 36 extensions, bringing the current number of active permits to 120. These numbers are a strong indicator of steady exploration activity in the territory, as are the 47 Quarry Permits also issued this year.
- Provided detailed comments, advice, and technical review to the Nunavut Impact Review Board for environmental assessment reviews of six major project proposals.
- Provided technical advice to the Nunavut Water Board in the assessment of 77 water licence applications, amendments and management plans. And provided technical advice for the joint environmental assessment and water licensing process for the Mary River iron ore project.
- Inspected 151 land and water authorizations associated with exploration camps, mines, and research camps and inspected 7 municipal water licences.
- Completed field reviews of 17 exploration and mine development projects.

According to statistics released by Natural Resources Canada in November 2012, it is estimated that more than $420 million has been spent on exploration and deposit appraisal in Nunavut this year. That leaves Nunavut 4th in Canada in terms of overall investment, after Ontario, British Columbia, and Quebec. Based on 2012 statistics, approximately 11,265,741 ha (112,657 km^2) of Crown land in Nunavut is covered by prospecting permits, mineral claims, coal licences, and mineral leases. This equals about 5.7% of Nunavut's land area.

Consistent with Canada's Northern Strategy, AANDC continues to focus on creating jobs and long term prosperity across Canada's North. The goal is simple and straightforward: to make Canada's North a more attractive place for resource investment and development, while protecting our environment and respecting land claims obligations. The North is two-fifths of Canada's land mass. With world-class mineral, oil and gas deposits, the North offers an incredible opportunity for northerners to leverage the responsible development of resources to increase social and economic well-being and aid in the development of healthier, more sustainable communities.

For a complete report of Canada's progress, please visit the Government of Canada website: www.northernstrategy.gc.ca

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The Government of Nunavut (GN), through the Department of Economic Development and Transportation (EDT), is committed to building and supporting a strong and diversified minerals industry based on best practices of sustainable development, and partnerships between Nunavummiut and industry. The Minerals & Petroleum Resources division is working in support of a resource exploration and development sector across the territory. With one operating mine in Nunavut (the Meadowbank gold mine) and a number of advanced development projects, in addition to numerous quality discoveries, there are substantial opportunities possible in the future for Nunavut. EDT is working to ensure that all Nunavummiut (residents of Nunavut) are in a position to benefit from these opportunities, and that citizens have the opportunity to become full participants in the development underway in Nunavut.

We do recognize that exploration and mining companies operate worldwide and therefore have options of choosing to invest elsewhere. EDT works with its partners at Nunavut Tunngavik Incorporated and the Government of Canada to ensure that the business environment (legislative, policy and regulatory) of Nunavut is efficient, internationally competitive and attractive to investors. The mineral industry in Nunavut has a robust level of activity with significant spending by both major, multinational mining companies and junior exploration companies. This vibrant economy and investment in the territory by the mining sector is a strong vote of confidence in Nunavut's mineral potential, its regulatory system, and the commitment of its people.

The department has its headquarters in Iqaluit; Resident Geologist Offices in Arviat and Cambridge Bay; and other regional offices in Kugluktuk, Rankin Inlet, Pond Inlet and Pangnirtung.

URANIUM POLICY STATEMENT

The Government of Nunavut's *Uranium Policy Statement* was released in June 2012. Public forums were held across the territory in 2011, to gain insight into public views on uranium development. This important work helped develop the GN's Policy Statement on uranium issues. The Uranium Policy Statement can be viewed in full at www.uranium.gov.nu.ca.

In brief, according to the policy, the GN supports safe and responsible development of uranium, subject to the following principles:

- The GN supports development that provides substantive and sustainable benefits to Nunavut without harming the environment. It is recognized that uranium mining places special responsibilities on governments and this mining raises environmental, health, moral, and political questions that are distinct from other types of mining.
- The GN also recognizes the jurisdiction of the Nunavut Impact Review Board and the Nunavut Water Board as established by the Nunavut Land Claims Agreement in the regulation of uranium exploration and mining. Additionally, it is recognized that uranium is subject to international agreements and national laws, and the government supports the mandate and responsibilities of the Canadian Nuclear Safety Commission.
- Uranium mined in Nunavut shall be used only for peaceful and environmentally responsible purposes.
- Nunavummiut must be the major beneficiaries of uranium exploration and mining activities.
- The health and safety of workers involved in uranium exploration and mining and all Nunavummiut shall be protected to national standards.
- Environmental standards must be assured for uranium exploration and mining, especially for the land, water, and wildlife.
- Uranium exploration and mining must have the support of Nunavummiut, with particular emphasis on communities close to uranium development.

Serpentine carving stone in Resolute Bay
courtesy of the Government of Nunavut

PARNAUTIT: THE NUNAVUT MINERAL EXPLORATION AND MINING STRATEGY

Parnautit: The Nunavut Mineral Exploration & Mining Strategy was released in 2007 as the GN's framework of policies and actions to encourage mineral discovery and development in Nunavut. There are four pillars of the strategy that collectively address the territory's regulatory and taxation regimes, workforce training, infrastructure development and environmental baseline data availability. The goal of *Parnautit* is: "To create the conditions for a strong and sustainable minerals industry that contributes to a high and sustainable quality of life for all Nunavummiut."

The GN remains strongly committed to public geoscience as a means of encouraging new exploration opportunities. The GN provides core funding to the Canada-Nunavut Geoscience Office in Iqaluit, and direct program support of the CNGO's territorial mapping and research projects.

DEVELOPMENT PARTNERSHIP AGREEMENTS

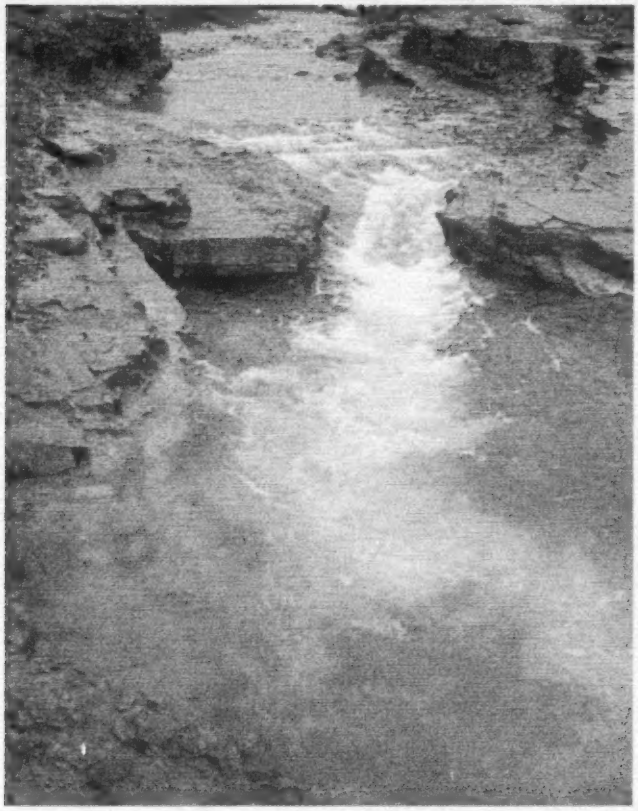
The Government of Nunavut updated its development partnership agreement policy and cabinet approved it in January 2012. The policy is intended to maximize social and economic benefits for Nunavut and to contribute long-term investment to Nunavummiut, their businesses, and their communities.

Development Partnership Agreements (DPA) were introduced in 2006 as a means of extending the territorial off-road fuel tax credit (rebate) to developing and producing mines. Through a DPA, a mining company or operator of a resource development project work cooperatively with the GN to maximize social and economic benefits for Nunavut. A DPA addresses such benefits as education and training, socio-economic monitoring and mitigation, and infrastructure development. As the physical and economic environments of any two mines are not alike, each DPA, too, will be different and will reflect the unique and shared needs of the mine operator and the local population. Proponents entering Nunavut's regulatory process are encouraged to begin negotiations with the GN on a DPA for their project.

The GN currently has one DPA in place with Agnico-Eagle Mines Ltd. and its Meadowbank gold mine. The department continues to work with Agnico-Eagle to ensure that the company complies with the terms of the Agreement.

CARVING STONE DEPOSIT EVALUATION

The Nunavut Carving Stone Deposit Evaluation Program is a collaborative project with the Canada-Nunavut Geoscience Office (CNGO). EDT geological and technical staff have been working on this multi-year (2010-2014) deposit/commodity study of carving stone locations. The objective of this territory-wide project is to address carving stone source-material requirements for artisanal suitability and supply for



Resolute Bay River
Courtesy of the Government of Nunavut

many communities, and to locate and evaluate new carving stone deposits. As part of this work, a graduate student from the University of Manitoba is examining the styles and characteristics of the carving stone deposits at Aberdeen Bay west of Kimmirut. Data collected will be distributed via an interactive web database and will include site-specific artisanal, spatial, geographical, geological, and photographic information. Site materials are collected for archival, analytical, and demonstrative purposes. The Canadian Northern Economic Development Agency (CanNor) and department funding support the carving stone program work.

To date, a total of 75 sites near 20 communities have been visited during the 2010, 2011, and 2012 field seasons. This has involved work in two regions, the Kivalliq and Qikiqtani, with the upcoming final year of the project (2013) to be conducted in the western part of the territory, the Kitikmeot Region. The carving stone resources and deposits are all accessible to communities and were initially identified either by community carvers or from results of past geological studies. The raw material most preferred by Nunavut carvers is dark-coloured, good quality, soft serpentinite. Sites of carving stone range in size from small localities containing hundreds of kilograms to large deposits containing thousands of kilograms.

In 2012, fieldwork focussed on known or presumed deposits around the communities of Arctic Bay, Baker Lake, Clyde River, Iqaluit, Pond Inlet, and Rankin Inlet; sites selected for evaluation close to Qikiqtarjuaq could not be visited due to weather. Consultations were undertaken in the fall of 2012 in the Kitikmeot communities of Cambridge Bay, Gjoa Haven, Kugluktuk, Kugaaruk and Taloyoak; the sites identified will be evaluated by field visits in 2013.

Results to date have determined a total of 18 quarries and deposits are now considered to contain substantial resources; most of these were previously known but the Carving Stone Deposit Evaluation Program has located at least five additional deposits to add to those known, and augmented the known deposits with additional resources. Three new large deposits were discovered in 2012: A soapstone deposit was found 110 kilometre (km) southwest of Iqaluit at Ikatuyak Hamlen Bay, on the Hall Peninsula by federal government geologists as part of the CNGO Hall Peninsula work. A second deposit was confirmed 95 km west of Baker Lake. A third resource was found five kilometres southeast of Baffinland's Mary River iron ore deposit; the dark green to black soapstone resource is easily accessible to Pond Inlet.

Two extraordinary carving stone deposits in the million-tonne range were accurately located in 2011. Both these deposits had been identified and mapped by the Geological Survey of Canada 40 years ago but were not known to the nearby communities. The 1,500 metre-long Kovic deposit is located 145 km inland from Repulse Bay. The 610 metre-long Kingora River deposit is approximately 105 km inland from Hall Beach and Igloolik. Both deposits are 45 metres wide, the same length as Nunavut's oldest producing quarry.

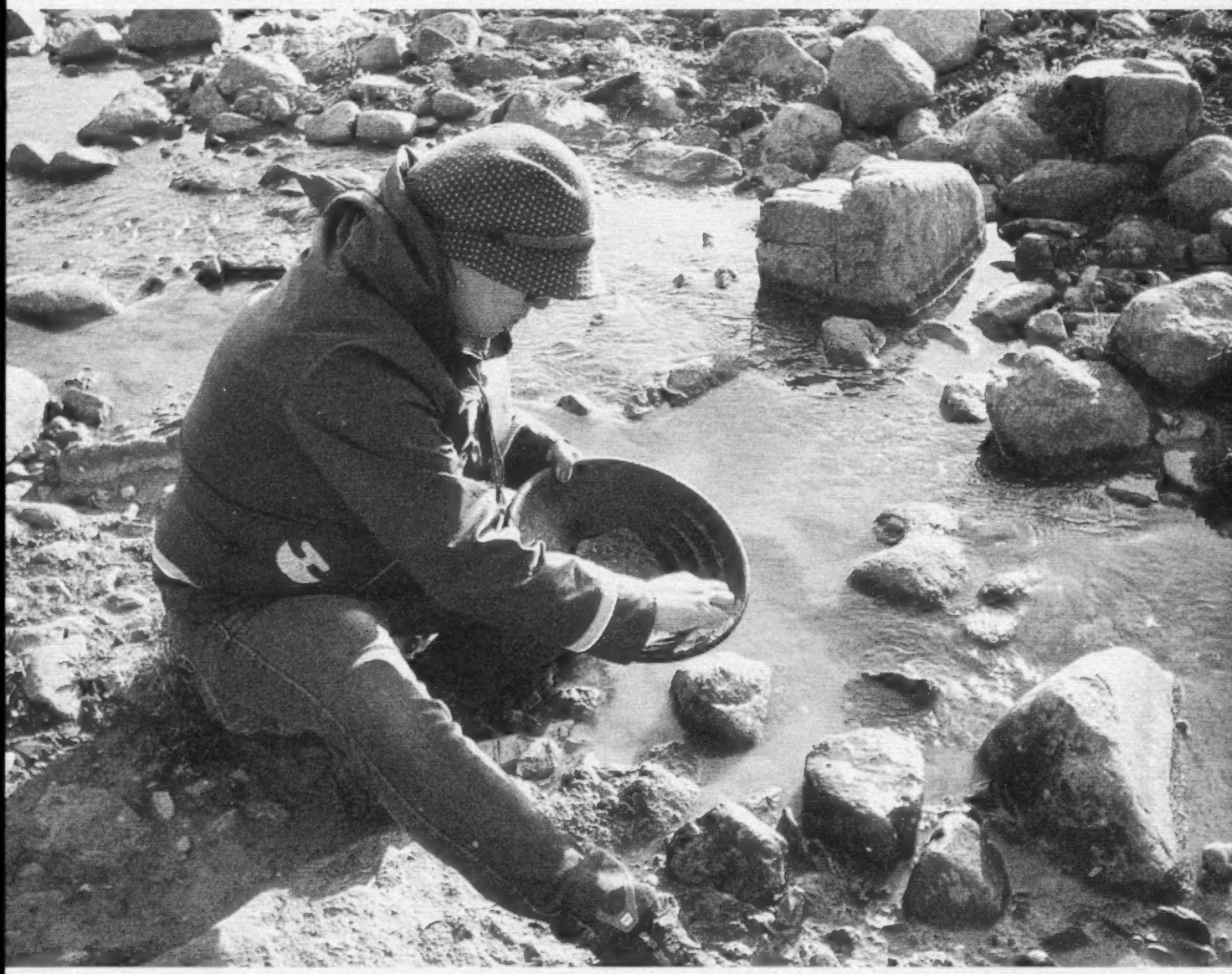
The Nunavut Carving Stone Deposit Evaluation Program has doubled the number of significant deposits of carving stone in Nunavut. The department is working with and reporting results back to economic development officers, communities, the Nunavut Arts and Crafts Association, Regional Inuit Organizations, and government and scientific agencies. With the new resources found, 20 of Nunavut's 25 communities now have accessible carving stone. Arviat, Chesterfield Inlet, Grise Fiord, Repulse Bay and Whale Cove remain impoverished for carving stone resources.

NUNAVUT PROSPECTORS' PROGRAM & INTRODUCTION TO PROSPECTING TRAINING

Every year, EDT geologists present a six-day Introduction to Prospecting Course to interested residents in communities throughout the territory. Each community has the course delivered every three to four years. Since 2000, the courses have been held across Nunavut, with more than 800 graduates to date. This introductory prospecting course introduces people to basic prospecting skills; many graduates have applied to the Nunavut Prospectors' Program for funding to start their own projects. Additionally, graduates of the course often obtain work as field assistants in exploration projects. In 2012, courses were held in Grise Fiord, Kugluktuk, Pangnirtung, Qikiqtarjuaq and Resolute.

Through the Nunavut Prospectors' Program, EDT provides technical and financial assistance to Nunavummiut with demonstrated prospecting skills who want to carry out their own work and project. This program, introduced in 1999, provides up to $8,000 in annual financial assistance for each qualified prospector. There are typically 15 to 20 individual prospector's projects funded annually through this program in all regions of Nunavut. The guidebook, applications forms, and Nunavut Prospectors' Program policy are currently being updated.

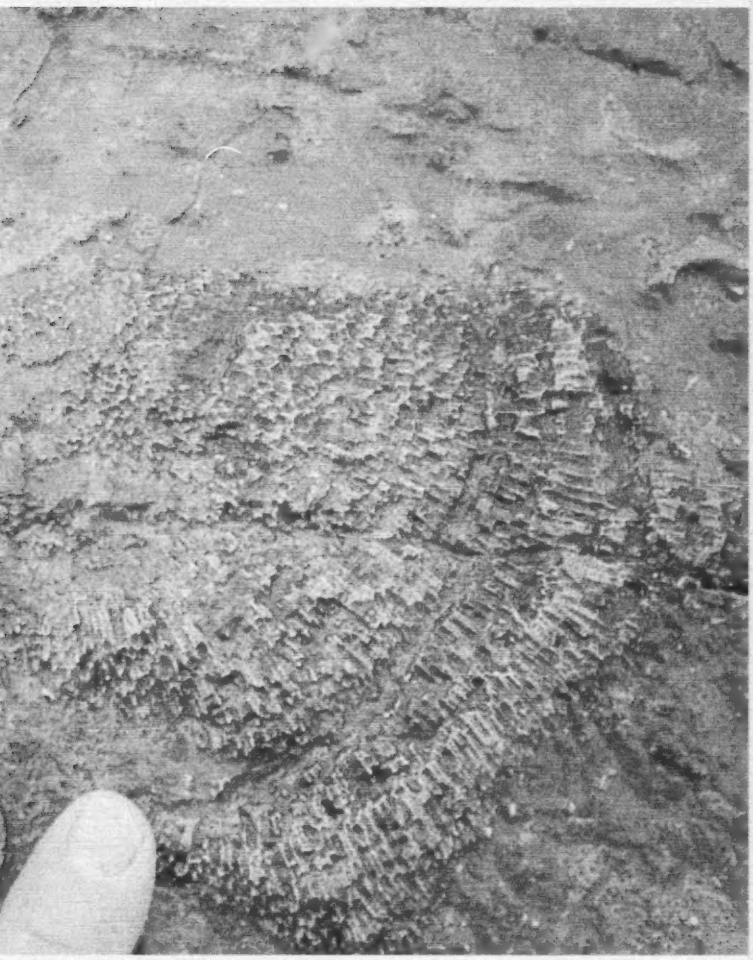
Panning in Grise Fiord
Courtesy of the Government of Nunavut



MINERALS EDUCATION AND TRAINING

EDT works with many other stakeholders, including the GN Department of Education, the Government of Canada, and the mining and exploration industries, on a number of programs designed to inform all Nunavummiut of the opportunities in the mineral resources industries. EDT programs and initiatives include the Nunavut High School Math and Science Awards Program, the Independent Science Program for Youth (I-SPY) to support science-education camps and activities throughout Nunavut, the Mineral Exploration Field Assistant's Course (offered by Nunavut Arctic College), curriculum development for Nunavut schools, and Careers in Mining school and community presentations.

Fossilized tabulate coral near Resolute
courtesy of the Government of Nunavut



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NUNAVUT TUNNGAVIK INCORPORATED

Nunavut Tunngavik Incorporated (NTI) is the Inuit corporation responsible for overseeing implementation of the Nunavut Land Claims Agreement. NTI's mandate includes safeguarding, administering and advancing the rights and benefits of the Inuit of Nunavut to promote their economic, social and cultural well-being through succeeding generations. The Lands and Resources Department of NTI, in cooperation with the three Regional Inuit Associations (RIAs) who are the surface owners of the Inuit Owned Lands (IOL) parcels, is responsible for the implementation of Inuit responsibilities related to the management of IOL, minerals, oil and gas, and marine areas.

NTI is the manager of the minerals for which the Inuit are the fee simple title owners. For these minerals, NTI issues mineral rights through a negotiated Exploration Agreement (EA) that provides a holder the right, if it meets the terms of the EA, to receive a Mineral Production Lease that allows for mining a discovered resource.

NTI uses a map selection system for the acquisition of mineral rights. Interested parties submit to NTI an Expression of Interest, which includes a map of the proposed exploration area. Expressions of Interest and subsequent correspondence and negotiation are kept confidential with NTI and the applicable RIA until required to be made public, typically upon signing of a Memorandum of Understanding between NTI and the applicant outlining the agreed terms upon which the EA will be developed.

Although the process described normally applies, NTI, as a private organization, has complete discretion as to whether it will issue an EA (or other agreement), what the process will be for obtaining an agreement, and what the terms of the agreement will be. The terms may include, for example, NTI holding a direct interest in a project or seeking additional benefits such as shares or milestone payments.

Under the standard terms, successful applicants, upon executing the new EA and submitting the first year's annual fees, will be granted the exclusive right to explore for minerals on the Exploration Area. In order to gain access to the land, however, the applicant must obtain a surface right issued by the RIA.

Holders of Exploration Agreements are required to submit annual exploration work reports to NTI that remain confidential for a period of up to three years.

NTI URANIUM, MINING AND RECLAMATION POLICIES

NTI has developed a series of policies applicable to exploration and mining, specifically a general Mining Policy, a Uranium Policy, and a Reclamation Policy. The policies provide that NTI will support exploration and mining provided there are minimal negative environmental and socioeconomic impacts; that Inuit cultural and social needs are respected; that investment in Nunavut is encouraged; that land-use conflicts are resolved equitably; and that Inuit economic opportunities are maximized. The texts of all the policies are available from NTI.

Wolf spider, Haig Inlet (Belcher Islands)
Courtesy of NWMO

PROJECTS ON INUIT OWNED LANDS

Many of the advanced exploration projects in Nunavut fall on IOL parcels for which NTI is the mineral title owner. The adjacent table summarizes some of the current active Exploration Agreements and their locations.

Project/Deposit	Holder(s)
Kitikmeot Region	
Contwoyto (TAK)	Shear Diamonds Ltd.
High Lake[1]	MMG Resources Inc.
Hope Bay[2]	Hope Bay Mining Ltd.
Kivalliq Region	
Angilak/Lac Cinquante	Kivalliq Energy Corporation
Churchill/Sedna	Shear Diamonds Ltd., 4579 Nunavut Ltd.
Meadowbank[3]	Agnico-Eagle Mines Ltd.
Meliadine[4]	Agnico-Eagle Mines Ltd.
North Thelon/Ukalik	Forum Uranium Corp.
Peter Lake	Canada Nickel Corp.
Qikiqtani Region	
Baffin Island Gold[5]	Commander Resources Ltd.
Haig Inlet	Canadian Orebodies Ltd.
Mary River/Eqe Bay[6]	Baffinland Iron Mines Corporation
SQ-05	McKinnon Prospecting Ltd.

Note: All projects referenced above are discussed in this report.

1 The project involves Crown land and land held under NTI Exploration Agreements and grandfathered leases.

2 The Boston deposit is located on surface IOL, while the Doris, Madrid, South Patch, Naartok and Suluk deposits are on subsurface IOL, distributed among grandfathered leases and NTI Exploration Agreements. Potential extension of the Boston deposit down-dip or along strike to the north will also be on subsurface IOL.

3 The project involves land held under NTI Exploration Agreements and grandfathered leases.

4 The project involves land held under NTI Exploration Agreements as well as grandfathered claims and leases.

5 The overall project involves Crown land and subsurface IOL.

6 The Mary River project is located on a grandfathered lease. Additional showings and deposits in the area are located on a mixture of subsurface IOL and Crown land. In October 2012, NTI added the Eqe Bay iron showings to the Baffinland agreement.

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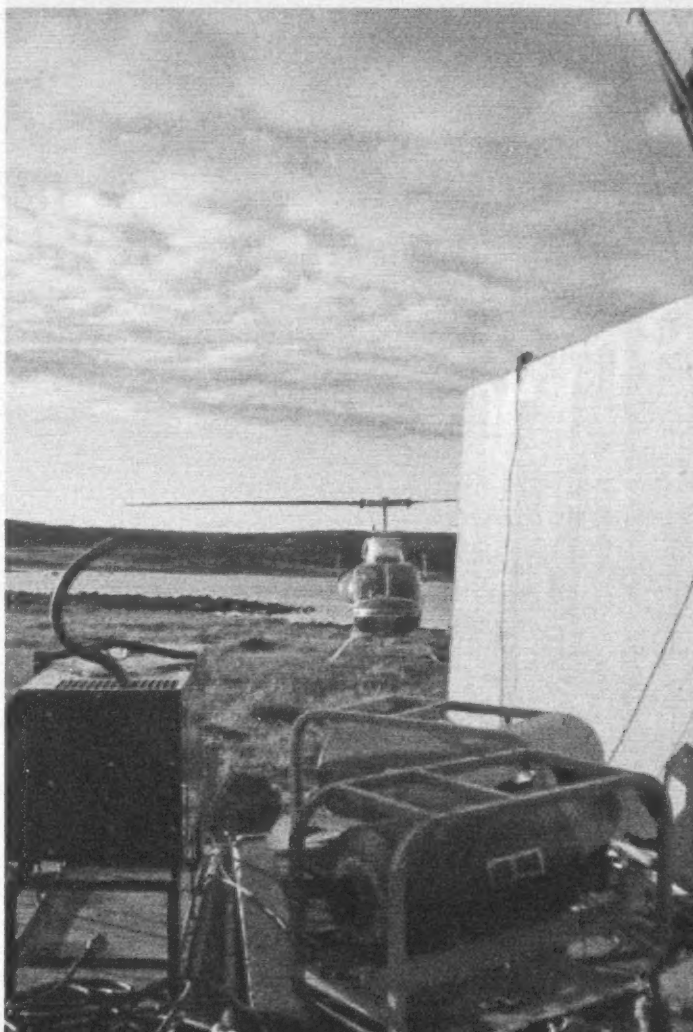
Helicopter and diamond drill at Meliadine project
Courtesy of Agnico Eagle Mines



CANADA–NUNAVUT GEOSCIENCE OFFICE

Development of Nunavut's mineral and energy resources, and the infrastructure required to service it and communities, forms an important foundation for the territory's economy. The Canada–Nunavut Geoscience Office (CNGO) was established in 1999 to help foster this development. It is a partnership between Natural Resources Canada (NRCan), Aboriginal Affairs and Northern Development Canada (AANDC), and the Government of Nunavut's Department of Economic Development and Transportation. Nunavut Tunngavik Incorporated (NTI) is an ex-officio member of the office.

The Canada-Nunavut Geoscience Office is moving in February 2013 into the new Inuksugait Phase IV building. Fully staffed the office consists of seven employees with expertise in Paleozoic, bedrock and surficial geology, GIS, and online data dissemination.

The mandate of CNGO is to provide geoscience information and expertise that supports:

- responsible resource exploration and development;
- responsible infrastructure development;
- education and training; and
- geoscience awareness and outreach.

CNGO concentrates on new geoscience mapping and research, supporting geoscience capacity building, disseminating geoscience information, and developing collaborative partnerships of strategic importance to Nunavut.

Geoscience projects conducted by CNGO in 2012 focused on four key areas: mineral deposit studies, regional geoscience, geoscience for infrastructure, and carving stone. Summaries of the highlights from each of the projects are provided below; more detailed papers with preliminary observations and interpretations will be published in a new *Summary of Activities* volume that will be available online at www.NunavutGeoscience.ca in early 2013.

MINERAL DEPOSIT STUDIES

The objective of mineral deposit studies is to increase the prospectivity and understanding of mineral districts across the territory. In 2012, emphasis continued to be placed on a multi-year endeavor in the Borden Basin that encompasses a suite of investigations aimed at understanding the geological evolution and economic potential of Mesoproterozoic basins of eastern Nunavut. The project is being led by Laurentian University with logistical support provided by the Polar Continental Shelf Project. Field work focused on mapping the deep-water carbonate mounds of the Ikpiarjuk Formation which are hundreds of metres thick and kilometres in diameter. These mounds are associated with the black shale of the upper Arctic Bay Formation and syndepositional faults. Field work focused on mapping and establishing the stratigraphic context and depositional environments for the known mounds.

REGIONAL GEOSCIENCE

The aim of regional geoscience research is to raise the level of public knowledge of the land and its resources in Nunavut. This information supports decision-making for land-use planning and exploration.

Hall Peninsula Project:

During summer 2012, the main regional geoscience project in Nunavut was the Hall Peninsula Integrated Geoscience Project led by the CNGO in collaboration with Dalhousie University, University of Ottawa, University of Saskatchewan, University of Manitoba, Université Laval, Nunavut Arctic College, the Canadian Museum of Nature, the Geological Survey of Canada, Peregrine Diamonds Ltd., and supported by several local, Inuit-owned businesses. A camp with a staff of between twenty and twenty-five people was located in the southern part of the peninsula between June 22 and August 8. Field work included bedrock mapping at a scale of 1:250,000 and quaternary mapping at a scale of 1:100,000. Surficial sediment mapping of glacial deposits was carried out from the camp and out of Iqaluit. The study area comprises all or parts of six NTS map sheets (26A, 26B, 25I, 25J, 25O, and 25P) north and east of Iqaluit.

The regional bedrock-mapping component of the Hall Peninsula project focuses on producing new thematic studies that will improve our geoscience knowledge of eastern Baffin Island. These include contributions to metamorphic

and tectonic studies, regional geochronology on major bedrock map units (approximately 20 samples collected), thermochronology to study landscape evolution and uplift, micro-diamond studies to characterize the mantle sources of the cratonic root and gain insights into damond formation and preservation beneath the Hall Peninsula, studying conodonts from carbonate xenoliths in kimberlite pipes to estimate the total thickness of Lower Paleozoic sedimentary cover and the degree to which the xenoliths were heated by the kimberlites, and detailed mapping projects to solve specific structural problems and better assess resource potential in prospective areas. A key discovery was finding 11 new ultramafic occurrences that could provide local carvers with new sources of soapstone for carving.

As part of the quaternary mapping of the region mineralized outcrops and till were sampled to assess economic potential. Samples of glacial till were taken for 136 geochemical and 90 heavy mineral analyses. Detailed mapping of the surficial geology, glacial dynamics studies, and the geotechnical characterization of permafrost cores to assess ice content and thaw properties are also being conducted on Hall Peninsula.

GEM Program:

Over the past six years the CNGO has collaborated with NRCan's Geo-mapping for Energy and Minerals (GEM) program to evaluate the petroleum potential of Hudson Bay and Foxe Basins in eastern Nunavut. The goals of this work have been to better understand the Paleozoic stratigraphy in the basins, to provide a stratigraphic correlation between Hudson Bay Basin and Foxe Basin, and to assess the petroleum potential in the region. As part of this research, fieldwork has been carried out by CNGO on Southampton Island at the north margin of the Hudson Bay Basin, on Melville Peninsula at the northwest margin of Foxe Basin, and on southern Baffin Island on the southeast margin of Foxe Basin.

GEOSCIENCE FOR INFRASTRUCTURE

Since 2009, the Canada-Nunavut Geoscience Office, Natural Resources Canada, the Geological Survey of Canada, and Université Laval have been collaborating to apply geoscience knowledge and expertise to help government, community and industry stakeholders better understand landscape constraints for infrastructure development. To date, applied research has focused on permafrost, terrain hazard mapping, and coastal erosion and sea-level rise in communities and regions at risk across the territory.

Iqaluit Permafrost Studies:

Permafrost and terrain stability research on key strategic infrastructure continues in the City of Iqaluit with an emphasis on the Iqaluit Airport, the gateway to the eastern Canadian Arctic. The city and airport infrastructure is underlain by continuous permafrost that is now warming and thawing resulting in terrain instability. Recent results have demonstrated a clear link between original terrain units, permafrost features, and the problems currently affecting infrastructure. Surficial geological mapping of the Iqaluit

Geologist sampling, Hall Peninsula
Courtesy of CNGO

airport shows that it was built over a dense network of ice wedge polygons and that pre-existing lakes and streams were filled to build embankments for the runway, taxiways and apron. Many of the permafrost-related problems that exist can be linked to these pre-construction features. Stable ground occurs in areas underlain by bedrock and till (e.g. Iqaluit's Plateau subdivision), whereas areas with differential thaw settlement are visible in older parts of the City that are built on old glaciomarine sands and silts. Several permafrost temperature monitoring sites have been installed in the urban area, at the airport, and in natural, undisturbed landscapes to characterize ground thermal regimes and measure thaw.

Coastal Climate Change:

New collaborative research between scientists from the Climate Change Geoscience Program (CCGP) of the Earth Sciences Sector of NRCan is addressing coastal climate change issues across Nunavut. The focus of activities has been on regions, localities, and communities where the resource industry utilizes existing coastal infrastructure or where industry activity may lead to development of coastal infrastructure. Coastal conditions and processes that can be observed and interpreted by a variety of local and remotely sensed techniques affect these developments. A focus this year has been the Coronation Gulf and surrounding regions, although activities have also occurred in other parts of Nunavut.

CARVING STONE

Through its *Ukkusiksaqtarvik: The Place Where We Find Stone, Carving Stone Supply Action Plan* the Government of Nunavut has prioritized the need for determining the supply of raw carving stone on behalf of Inuit artisans. To support this plan the CNGO is collaborating with the Government of Nunavut's Carving Stone Deposit Evaluation Program to verify the quality and size of hand-mined carving stone deposits and identify new deposits throughout the territory. It will also support new, value-added, MSc research by University of Manitoba that help understand if geochemical composition, isotopic characteristics and microstructures influence the carveability of the rock and how the geochemistry and structures of soapstone deposits are influenced by fluid flow patterns in the middle and upper crust. This latter investigation may provide insight into how to identify favourable tectonic settings for the formation of soapstone deposits.

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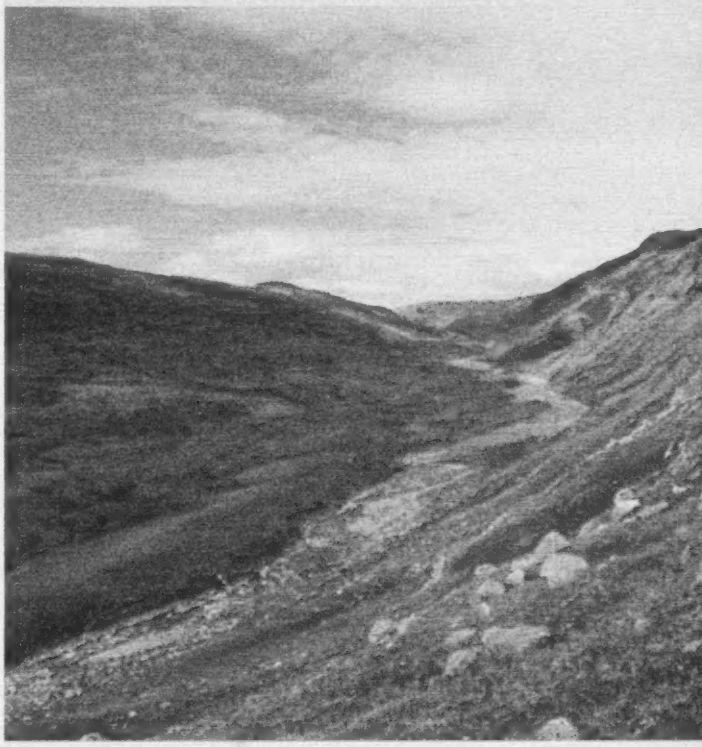
Nunavut Geoscience Data

www.nunavutgeoscience.ca



Creek in a valley, Hall Peninsula
Courtesy of CNGO

The NWT & Nunavut Chamber of Mines is the leading advocate for mining and mineral development in Canada's North. The Chamber of Mines serves companies operating in the Northwest Territories (NWT) and Nunavut and has been the voice of the northern mining and exploration industry since 1967. Its goals are to promote the industry to Northerners, Canadians, and the world at large. It speaks out on industry concerns and issues and advises governments, investors, the media, schools and universities, and the public on industry positions and initiatives.

Key objectives of the Chamber of Mines are: to encourage, assist and stimulate prosperous, orderly and environmentally responsible development and growth of mining and exploration, in all modes and phases, in the NWT and Nunavut; to inform the public of matters relating to mining and exploration; and to cooperate with and seek input from all persons, associations, corporations and authorities, both public and private, to attain these objectives.

The Chamber of Mines:

- is industry's voice and advocate for sustainable mineral development, ensuring a balanced and workable approach to regulations, regulatory reform, protected areas, and mineral policy;
- is the liaison between industry, governments and regulators on land access, employment, and infrastructure development;
- helps educate business and the public about the critical role of mining in providing the essentials, and luxuries, of everyday life;
- encourages the development of a skilled labour force through promotion of mining careers and training;
- encourages and supports networking and business opportunities among northern businesses; and
- builds relationships between mining and mineral exploration companies and suppliers, governments, regulators, and Aboriginal groups.

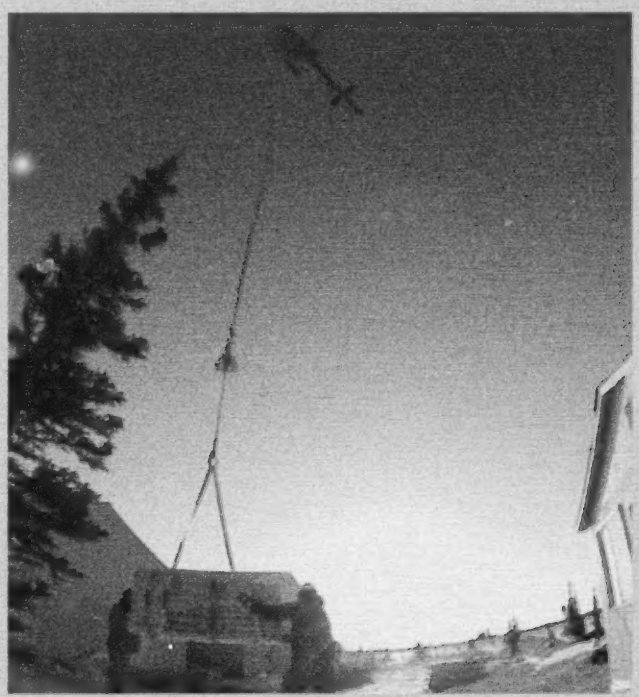
MEMBERSHIP AND OPERATIONS

The Chamber of Mines is a non-profit organization and maintains its head office in Yellowknife. Along with acting as the main point of contact for the NWT & Nunavut mining industry, staff researches current issues, arranges meetings, and assists in organizing special events including the annual Geoscience Forum, Nunavut Mining Symposium, NWT Mining Week, and the Chamber's Annual General Meeting.

The Chamber of Mines provides valuable input from its members to government on policy and legislation related to mineral exploration and mining. Various levels of government can seek advice and industry response on a variety of initiatives that improve industry's contributions to Canada's North, which include training, employment and business with northerners, supplying infrastructure, and providing critical and significant revenues.

Any company, organization or individual with an interest in the mineral industry can join the Chamber of Mines. The Chamber currently has over 900 members including mining and exploration companies, consulting firms, a wide range of service suppliers from drilling to aviation companies, expediters, geologists and prospectors, and many others simply interested in supporting the northern mining industry.

Slinging core at Kiyuk camp, Kivalliq



NUNAVUT OFFICE

Prior to division of the two territories in 1999, the Chamber of Mines represented the interests of Nunavut from its Yellowknife office. Given the mounting interest in mineral exploration in Nunavut, the strong support of Nunavummiut for mining, and the increasing number of Chamber members with operations in the territory, the time had come to establish a new office in Nunavut. That office opened in Iqaluit, during the spring of 2011. As the first-ever mining association office in Nunavut, the Nunavut Office provides dedicated support to this expanding minerals jurisdiction.

Nunavut continued to experience healthy investment in exploration and development in 2012 and the Chamber looks forward to many years working with Nunavummiut to create and maintain a strong and vibrant Nunavut minerals industry that serves the interests of Nunavut and Canada.

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Archean green mafic volcanic rocks with rusty grey sheared units, Falstaff Island east of Rankin Inlet
Courtesy of University of Manitoba

KITIKMEOT REGION

OVERVIEW

The Kitikmeot region is the second largest of Nunavut's three administrative districts, with an area of 446,728 square kilometres. This region includes the northern and western parts of the Nunavut mainland, King William Island, and portions of Prince of Wales Island and Victoria Island. Cambridge Bay and Kugluktuk are the largest communities in the region and along with Yellowknife in the Northwest Territories provide logistical support, supplies and services for exploration projects. The region's other communities, Gjoa Haven, Taloyoak, and Kugaaruk, are all located in the eastern Kitikmeot region.

Located within the Canadian Shield, the Kitikmeot region is underlain by rocks of Archean and Proterozoic age comprising portions of the Slave, Bear, and Churchill geological provinces. The northern part of the region is underlain by Paleozoic strata of the Arctic Platform. The region is known to host base metals, diamonds, gold, lithium, platinum group elements (PGE), and uranium. Emeralds were also recently discovered in the eastern Kitikmeot region.

Almost all exploration activity in this region in 2012 was carried out by mid-tier to major mining companies exploring for gold and base metals. MMG Resources Inc. conducted exploration programs at the Hood and Izok Lake properties for zinc-copper mineralization. MMG submitted a project description for its Izok Corridor Project to the Nunavut Impact Review Board (NIRB) in August 2012. This project would involve construction of a mine and mill at Izok Lake, a mine at High Lake, a port at Grays Bay on the Coronation Gulf, and a 350-kilometre (km) road from Izok Lake to the port.

Xstrata Zinc Canada, owners of the Hackett River project, is partnering with Sabina Gold & Silver Corp. to discuss building a road from their respective projects to Bathurst Inlet. Sabina purchased the Bathurst Inlet Port and Road (BIPR) project in late 2011 and, with Xstrata, has re-engaged NIRB to complete the technical review of the BIPR project, which was suspended in 2008. Xstrata completed more than 50,000 m of drilling focused on identifying extensions of known deposits at the Hackett River silver-zinc project. Sabina carried out a $60 million exploration program at its Back River and Wishbone gold projects in 2012. For the Back River project, in 2012, the company produced a positive Preliminary Economic Assessment (PEA), initiated a preliminary feasibility study, and filed a project description with NIRB.

A number of projects active in previous years in the Kitikmeot were put on care and maintenance status in 2012, notably the Hope Bay gold project owned by Hope Bay Mining Ltd.

Out of 109 prospecting permits issued by Aboriginal Affairs and Northern Development Canada in 2012, 21 are located in the Kitikmeot region.

Bush Hawk at Reno Lake
Courtesy of Kitikmeot

Kitikmeot Region
50 25 0 50 100
Kilometres
Projection: Canada Lambert Conformal Conic, NAD 83
LEGEND
Commodity Groupings
Base Metals
Coal
Diamond
Gemstone
Gold
Iron
Lithium
Nickel-Copper-PGE
Rare Earth Elements
Uranium
Active Mine
Inactive Mine
Symbol with no fill means INACTIVE.
Bold project number and name signifies major or advancing project.
Areas with Surface and/or Subsurface Restrictions
CPMA Caribou Protection Measures Apply
MBS Migratory Bird Sanctuary
NP National Park
NWA National Wildlife Area
TP Territorial Park
WP Wildlife Preserve
WS Wildlife Sanctuary
Inuit Owned Lands (Fee simple title)
Surface Only
Surface and Subsurface
Geological Mapping Programs
Canada-Nunavut Geoscience Office (See master legend for details)
Boundaries
NLCA Nunavut Settlement Area
Nunavut Regions
NILCA Nunavik Settlement Area
Provincial / Territorial
Transportation Routes
Meadowbank Road
Mine Inlet Tote Road
Yellowknife-Contwoyto Winter Road
Proposed Bathurst Inlet Port and Road
Proposed Izok Corridor Road
Proposed Steensby Inlet Rail Line
PARRY ISLANDS
MELVILLE ISLAND
BATHURST ISLAND
PRINCE OF WALES ISLAND
VICTORIA ISLAND
Kitikmeot
Kivalliq
Cambridge Bay
Kugluktuk
Gjoa Haven
Taloyoak
Kugaaruk
Baker Lake
Chesterfield Inlet
Polaris Mine
Hope Bay
Back River
Hackett River
Bathurst Inlet
Izok Lake
Wishbone
Wishbone Gold
Amaruk
Amaruk Gold
Barrow
Committee Bay
Queen Maud Gulf MBS
Beverly CPMA
Ukkusiksalik NP
Tuktut Nogait NP
Tuktut Nogait (Proposed NP)
NORTHWEST TERRITORIES
TERRITOIRES DU NORD-OUEST
YELLOWKNIFE

BASE METALS

100[1] 101[2]	HACKETT RIVER[1], WISHBONE[2]
Operator/Owner	Xstrata Zinc Canada
Commodities	Silver, Zinc, Gold, Copper, Lead
NTS	76F/15, 76F/16[1,2]; 76F/01, 76F/08 – 76F/10, 76G/03 – 76G/06, 76J/04, 76K/01, 76K/02[2]
Land Tenure	Crown, Surface IOL, Subsurface IOL[1]; Crown, Surface IOL[2]
Location	355 km southeast of Kugluktuk[1]; 395 km southeast of Kugluktuk[2]

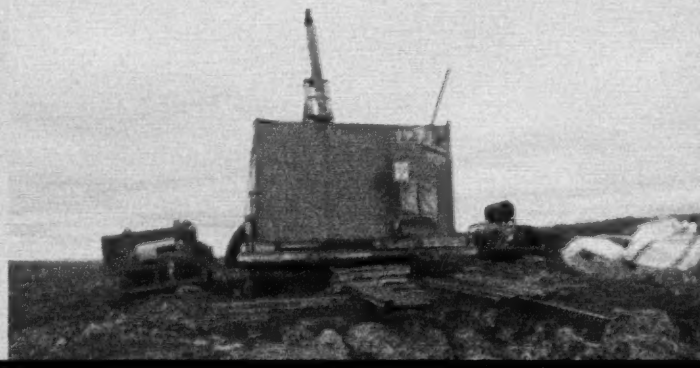
The Hackett River silver-rich volcanogenic massive sulphide (VMS) project and the surrounding Wishbone property are located within the Hackett River greenstone belt (also known as the Wishbone greenstone belt) in the Slave Structural Province. Xstrata acquired both properties from Sabina Gold & Silver Corp. in 2011. Three main deposits, Main Zone, Boot Lake, and East Cleaver, are known on the Hackett River property, as well as one satellite deposit, the Jo Zone. Sulphide mineralization occurs as tabular semi-massive to massive lenses at or near the contact between underlying felsic volcanics and overlying pelitic sediments. Stringer sulphide mineralization is locally developed beneath the massive sulphide lenses, and stratiform disseminated sulphides surround the massive sulphide and stringer zones.

Hackett River is considered one of the largest undeveloped VMS projects in Canada, and possibly the world, with estimated resources of 61.3 million tonnes (indicated and inferred) grading 4.2% Zn, 138 grams per tonne (g/t) Ag, 0.9% Pb, 0.5% Cu, and 0.2 g/t Au. Xstrata conducted an ambitious drill program on the property in 2012, which included 203 diamond drill holes totalling 51,548 metres (m). This work was focused on increasing the resource at Hackett River by targeting extensions of known deposits, as well as testing geochemical and geophysical anomalies within the mineral leases. The company also carried out geotechnical drilling and environmental baseline studies. No results from the 2012 work have been released, but the company has announced plans to carry out another 50,000 m of drilling on the project in 2013.

Xstrata has begun work to advance Hackett River through the regulatory process. Under past-operator Sabina, a project description for Hackett River was submitted to NIRB in 2008. The following year guidelines for the preparation of a Draft Environmental Impact Statement (DEIS) were provided to Sabina and a PEA was completed on the project. A shift in focus led Sabina to look for strategic partners to bring Hackett River to production, ultimately selling the project to Xstrata. A preliminary feasibility study was initiated in 2012, and Xstrata announced plans to submit a DEIS in 2013.

As part of the plans to develop Hackett River, Xstrata has formed a partnership with Sabina to permit and develop the BIPR project. The project calls for construction of a port and related facilities at Bathurst Inlet, a 211 kilometre (km) all-weather road connecting Bathurst Inlet to Contwoyto Lake, and a camp at Contwoyto Lake. The road would connect to the existing Tibbitt-Contwoyto winter road to Yellowknife. Nuna Logistics Limited and Kitikmeot Corporation jointly submitted a project description to NIRB in 2002 and had been working on the BIPR project, but suspended the environmental review in 2008 due to a lack of potential users for the infrastructure. Sabina purchased the project in 2011, and Sabina and Xstrata are working to re-start the review process for BIPR. With Xstrata as the lead, the companies announced their intention to file a revised DEIS for BIPR with NIRB, and are also seeking interest from other potential users of the project.

The Wishbone property comprises 238 mineral claims with a total area of almost 200,000 hectares (ha), as well as one mineral lease that includes the Musk VMS deposit discovered by Noranda Inc. in 1979. One hundred thirty-two claims were transferred from Sabina as part of the 2011 sale, with the balance staked by Xstrata the same year. The Wishbone property has received minimal exploration work in the past with recent work being reconnaissance in nature. Xstrata's program on Wishbone in 2012 included geological mapping and prospecting in areas where no drilling information was available. No results from this work have been released.



Drill at Hackett River
Courtesy of AANDC

102[1] 103[2]	HIGH LAKE[1], IZOK LAKE[2]
Operator/Owner	MMG Resources Inc.
Commodities	Zinc, Copper, Lead, Silver, Gold[1]; Zinc, Copper, Lead, Silver[2]
NTS	76M/07, 76M/10[1]; 86H/10, 86H/11, 86H/14[2]
Land Tenure	Crown, Subsurface IOL[1]; Crown, Surface IOL[2]
Location	185 km southeast of Kugluktuk[1], 250 km south of Kugluktuk[2]

Double rainbow over High Lake Camp
Courtesy of MMG Resources

The High Lake and Izok Lake VMS deposits each have a long history of exploration, being discovered in 1955 and 1975, respectively. Since acquiring the properties in 2009, MMG Resources has continued to explore the deposits and surrounding area, and has worked to determine how best to bring the deposits to production. Following a positive preliminary feasibility study in 2011, the company announced plans for its Izok Corridor Project. The project description, submitted to NIRB in 2012, outlines the project components, which include: mines, both open pit and underground, at both sites; a mill and tailings management facility at Izok Lake; a port at Grays Bay; and a 350 km all-season road linking the two mines and the port. The company also initiated a definitive feasibility study for the Izok Corridor Project in 2012.

The Izok Lake property is located within the Slave Province and includes five VMS deposits that exist under and near Izok Lake: Central, North, Northwest, Inukshuk and South. These deposits are associated with a succession of felsic volcanic rocks, primarily rhyolite, overlain by carbonate-bearing sediments of the Contwoyto Formation. A National Instrument (NI) 43-101-compliant resource estimate released in 2010 for the deposits includes 14.4 million tonnes of indicated resources grading 12.9% Zn, 2.5% Cu, 1.3% Pb and 70.5 g/t Ag, as well as an inferred resource of 369,000 tonnes grading 6.4% Zn, 3.79% Cu, 0.27% Pb and 54 g/t Ag.

The preliminary feasibility study included mining optimization exercises, which resulted in an estimated mining inventory of material in all zones that could be mined economically. The inventory includes 13.3 million tonnes of ore grading 13.5% Zn, 2.5% Cu, 1.4% Pb and 72 g/t Ag to be extracted by open pit mining methods, and one million tonnes of ore grading 7% Zn, 2.8% Cu, 0.3% Pb and 39 g/t Ag to be mined underground from the Inukshuk deposit. The estimated mine life for the operation is 11 years.

Work on the Izok Lake property in 2012 primarily consisted of diamond drilling and environmental baseline work. A total of 9,697 m of drilling in 67 holes took place this year, of which approximately 6,500 m was completed exploring geochemical and geophysical anomalies on the property. The balance was divided among resource delineation drilling and holes in support of metallurgical, geotechnical or hydrogeological studies. No results from the exploration drilling at Izok have been released.

The High Lake property is located within the eponymous greenstone belt in the northern part of the Slave Province. Three zones of VMS mineralization are known at High Lake, the AB, D and West zones. The AB and D zones are spaced 560 m apart, and are both located within a felsic volcanic sequence at or near the contact with a granodiorite intrusion. The West Zone is located 1.7 km from the AB and D zones and contains massive sulphide mineralization hosted at significant stratigraphic breaks.

High Lake possesses an indicated resource of 17.2 million tonnes of ore grading 3.35% Zn, 2.25% Cu, 0.31% Pb, 70 g/t Ag and 0.95 g/t Au. Of this, the mining inventory from the preliminary feasibility study only proposes to capture 6.9 million tonnes of ore: 2.7 million tonnes grading 1.3% Zn, 3.6% Cu and 33 g/t Ag are to be extracted from open pits at the AB and D zones, and 4.2 million tonnes grading 3.8% Zn, 2.7% Cu and 104 g/t Ag will be extracted from underground mining at the West Zone. Mine life for the High Lake operations is expected to be 12 years.

The High Lake deposits have been extensively drilled over a period of almost sixty years. Little exploration has been carried out on these zones in recent years; most work has focused on regional targets on the property. A minor amount of resource delineation drilling was carried out on site in 2012; no results from this work have been released.

104	HOOD
Operator/Owner	MMG Resources Inc.
Commodities	Copper, Zinc
NTS	86I/02
Land Tenure	Subsurface IOL
Location	215 km south of Kugluktuk

Copper and zinc VMS mineralization was first discovered at the Hood 10 deposit in 1972 by TexasGulf Inc. Subsequent work on the property, located within the Hood River supracrustal belt, resulted in the discovery of two other deposits. Historic, non-NI 43-101-compliant resources have been published for all three known deposits. Since the initial discovery was made, work has been carried out intermittently at Hood by a number of different operators. The Hood property was acquired by MMG Resources Inc. in 2009.

MMG carried out sampling, gravity surveys and re-logging of historic core at the property in 2011. This work was followed up in 2012 with a diamond-drilling program, the first since 1993. In total, 6,155 m were drilled in 15 drill holes. Twelve holes (5,182 m) were drilled into the Hood 10 deposit to test for down-dip and along-strike extensions of known mineralization. The drilling revealed that the deposit becomes increasingly copper-rich at depth. Significant results from the program include: 2.3% Cu, 3.9% Zn, and 34 g/t Ag over 9.5 m in hole H10-12-035; 12% Cu, 1.9% Zn, and 53 g/t Ag over 5.7 m in hole H10-12-036; and 11.4% Cu, 1.09% Zn, and 43 g/t Ag over 23.6 m in hole H10-12-037. The drilling results demonstrate good continuity of mineralization over the high-grade central portion of the deposit, which has been established over 100 m of strike length and to a depth of 400 m. The program also included three holes (973 m) drilled into the felsic volcanic-sedimentary contact at the western edge of the property. a ground pulse electromagnetic (EM) geophysical survey and a downhole EM geophysical survey on the drill holes.

The Hood deposits are viewed as potential sources of additional resources for the Izok Corridor project proposed by MMG. Further exploration at Hood may occur in 2013.

Core laid out at Hood
Courtesy of KIA/GN

DIAMONDS

160	HAMMER
Operator/Owner	Stornoway Diamond Corporation
Commodity	Diamonds
NTS	86I/15
Land Tenure	Crown
Location	140 km southeast of Kugluktuk

The Hammer property is located in the Coronation Gulf/North Slave diamond-district. Stornoway Diamond Corporation, with then-partner North Arrow Minerals, discovered the Hammer kimberlite in 2009 at the head of a previously unexplained kimberlite indicator mineral dispersion train. One microdiamond was recovered from samples collected during this program, confirming the kimberlite's diamondiferous nature. The kimberlite body is associated with a topographic depression that is approximately 225 m long and that varies from 15 to 100 m-wide, with an estimated area of 0.4 ha.

The 2011 exploration program was intended to delineate the extents of the body and to recover sufficient kimberlite for an initial diamond grade determination. Twenty-one drill holes totaling 1,800 m were completed, which confirmed the depth extent of the Hammer kimberlite to at least 200 m. In total, 930 m of core intersected kimberlite; from this material, 200 kg were submitted for microdiamond recovery, and 3.4 tonnes of core will be processed for macrodiamond recovery using a dense media separation process. No results from these analyses have been released.

No work was conducted at Hammer in 2012.

X 161	JERICHO MINE
Operator/Owner	Shear Diamonds Ltd.
Commodity	Diamonds
NTS	76E/13, 76E/14, 76L/03, 76L/04, 86H/16, 86I/01
Land Tenure	Crown, Surface IOL
Location	250 km southeast of Kugluktuk

Shear purchased the past-producing Jericho diamond mine and surrounding Carat property in 2010 and has since been working to bring the mine back into production. Jericho was Nunavut's first diamond mine, and entered production in 2006 under the control of Tahera Diamond Corporation. Operational difficulties resulted in financial losses over the life of the mine, forcing Tahera to suspend production early in 2008.

In late 2011, Shear signed an agreement with Taché Company N.V. to secure the funding necessary to begin recovery processing of reject stockpiles left by Tahera. Under the terms of the agreement, Taché provided a debt-financing loan and revolving credit facility to Shear, and Shear committed to delivering diamonds recovered from the stockpiles to Taché for sale as rough and polished diamonds. Shear would then receive a portion of the net profits Taché realized from these sales.

The company began processing its concentrate stockpiles in April 2012, and continued through the summer before temporarily halting production in August to repair equipment used in the diamond recovery process. Shear then suspended production in September based on lower-than-anticipated world diamond prices. A minimum of three parcels of diamonds totalling 47,516 carats were recovered from the stockpiles and delivered to Taché; a fourth parcel was scheduled to be shipped in mid-September. The size of this last parcel was not announced.

Shear is seeking financing or other transactions (joint venture, sale or otherwise) that will allow the company to advance the project.

GOLD

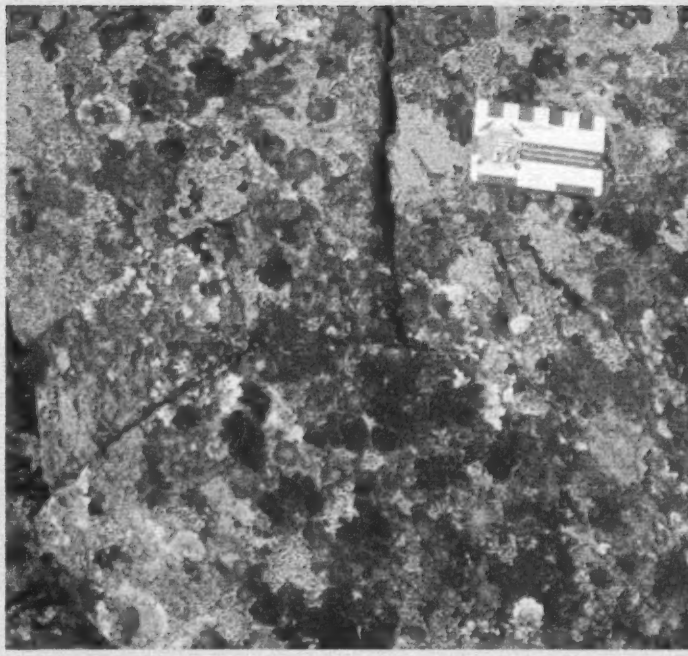
220[1] 221[2]	BACK RIVER (GEORGE LAKE[1], GOOSE LAKE[2])
Operator/Owner	Sabina Gold & Silver Corp.
Commodity	Gold
NTS	76G/13, 76G/14, 76J/03, 76J/04[1]; 76G/09, 76G/10[2]
Land Tenure	Surface IOL, Subsurface IOL[1]; Crown, Subsurface IOL[2]
Location	365 km southwest of Kugluktuk[1], 390 km southwest of Kugluktuk[2]

The Back River project is located in the northeastern corner of the Slave Structural Province, and comprises seven properties: Bath 1, Boot, Boulder, Del, George Lake, Goose Lake and Needle. The Back River properties host multiple deposits and occurrences of oxide and silicate banded iron formation (BIF)-hosted gold mineralization, which is commonly associated with quartz veins, silicification and shearing. The George Lake and Goose Lake properties have been the focus of all recent exploration and together host all known economic gold deposits within the project area.

The 2012 exploration on the Back River project included 69,661 m of diamond drilling, as well as environmental baseline and engineering studies and other work related to the permitting process.

The Goose Lake property hosts the historic Goose deposit, the significant Llama and Umwelt deposits discovered by Sabina in 2010, and the Goose Neck and Camp Zone occurrences discovered in 2011. The 2012 drill program focused on resource conversion and expansion drilling at Umwelt and Llama, drilling to examine the down-plunge potential at Goose, and drilling to evaluate the Goose Neck and Camp Zone discoveries.

Two diamond drills optimized for drilling deep holes were used to explore the down-plunge extension at Umwelt, targeting the G2 zone discovered in 2011. This drilling succeeded in extending the known mineralization at Umwelt 325 m down-plunge and to a vertical depth of 800 m. Results from the deep drilling program include 9.50 g/t Au over 7.2 m (hole 12GSE173), 9.73 g/t Au over 5.7 m (hole 12GSE191), and 51.93 g/t Au over 16.1 m (hole 12GSE217). Resource conversion drilling at the deposit also returned favourable results of 18.18 g/t Au over 25.7 m and 10.31 g/t Au over 39.9 m from drill holes 12GSE238 and 12GSE234, respectively.



Fold hinge in iron formation, Goose Lake property
Courtesy of MMD

Drilling on the Llama deposit focused on converting resources from the inferred category to the indicated category within the conceptualized open pit shell. Best results from the resource conversion program include 15.16 g/t Au over 36.4 m from drill hole 12GSE141, which also intersected a second mineralized zone with 41.05 m of 7.15 g/t Au, and 21.58 g/t Au over 12.9 m from drill hole 12GSE153. Resource expansion drilling at Llama also met with success, returning 10.9 m of 8.40 g/t Au, as well as 6.90 g/t Au over 8.0 m from other holes. This latter hole intersected the deep extension of Llama mineralization at a vertical depth of 490 m, and confirms that the mineralization extends at least 400 m south of the previous drilling.

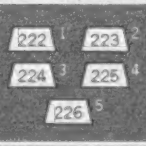
Two new discoveries were made on the Goose Lake property in 2012, the Goose Hook and Wing zones. Goose Hook is located 300 m to the west of the Goose deposit and is interpreted to be a sharply folded extension of that deposit. The discovery hole, 12GSE178, returned 3.65 g/t Au over 9.0 m with visible gold grains within that interval. The Wing Zone contains shallow gold mineralization between the

proposed Umwelt and Llama open pits, and was discovered by drilling targeting the extension of the Llama deposit at depth. This zone is hosted within a south-plunging antiformal iron formation above and to the west of the deep extension of the Llama deposit. Drill hole 12GSE226 returned 15.5 m of 12.68 g/t Au from the western limb of the anticline, as well as multiple lower-grade intersections from the east limb.

The George Lake property hosts five gold deposits: Locale 1, Locale 2, Lone Cow Pond, GH, and Slave. In-fill and resource conversion drilling was carried out on the George Lake deposits in 2012, and returned positive results of up to 16.16 g/t Au over 7.9 m at Locale 1; 12.84 g/t Au over 23.0 m at Locale 2; and 16.54 g/t Au over 25.5 m at Lone Cow Pond. A new discovery, the Fold Forest, was also made on the George Lake property. Mineralized intervals of up to 5.92 g/t Au over 5.0 m and 7.37 g/t Au over 2.0 m were returned within broader zones of gold-mineralized oxide iron formation in a thickened antiform structure with at least one kilometre of strike-length.

Exploration drilling on the Boulder property resulted in another discovery in 2012. This discovery was made following up on results from a historic drill hole, and includes an 11.0 m intersection of 4.05 g/t Au from a sequence of altered and sulphidized iron formation. More work is required to evaluate this prospect.

Sabina received a positive PEA for Back River in May 2012, and filed an updated NI 43-101 resource in July that includes all drilling up to the end of 2011. Indicated resources of 23 million tonnes and 9.3 million tonnes of inferred resources are included in the PEA, both grading 5.6 g/t Au for a total of 5.83 million ounces of gold. Based on the results of the PEA, Sabina initiated a preliminary feasibility study and filed a project description with NIRB to trigger the environmental assessment and permitting processes for Back River. The project description outlines the project's components, which could include up to three open pits (Goose, Llama and Umwelt) and seven underground mines (Goose, Umwelt, Locale 1, Locale 2, Lone Cow Pond, GH, and Slave). Additionally, there will be a centralized mill and tailings facility near Umwelt, camps at both Goose Lake and George Lake, a marine lay down area at Bathurst Inlet, and a combination of all-weather and winter roads to connect the properties to each other and to Bathurst Inlet. This project description is not reliant on the BIPR project Sabina is working on with Xstrata, but recognizes BIPR as an alternative to the company's plans for an independent road and marine lay down area. The project description anticipates an operation that would process up to 7,000 tonnes of ore per day and produce 300,000 to 400,000 ounces of gold per year for 10 to 15 years.



COMMITTEE BAY (ANURI-RAVEN[1], FOUR HILLS-COP[2], INUK[3], THREE BLUFFS[4], WEST PLAINS[5])	
Operator/Owner	North Country Gold Corp.
Commodity	Gold
NTS	56K07 – 56K/10[1]; 56K/06, 56K/07, 56K/10, 56K/11[2]; 56P/06, 56P/07[3]; 56J/10 – 56J/15[4]; 56K/03, 56K/04, 56K/06[5]
Land Tenure	Crown, Surface IOL
Location	245 km southwest of Kugaaruk[1], 265 km southwest of Kugaaruk[2], 130 km south of Kugaaruk[3], 215 km south of Kugaaruk[4], 300 km southwest of Kugaaruk[5]

Controlled by North Country Gold Corp., the 300 km-long Committee Bay greenstone belt has been explored for a number of years. The current focus of work is the 4.2 km-long Walker Lake Trend that hosts the Three Bluffs deposit, as well as the Antler and Hayes target areas. The company recognizes four other areas within the belt, which it believes have the potential to host gold deposits: Anuri-Raven, Four

Core storage at Committee Bay
Courtesy of AANDC

Hills-Cop, Inuk, and West Plains. The company consolidated control of additional mineral tenure within the Committee Bay belt in 2012 by acquiring eight claims, proximal to North Country Gold's Three Bluffs and West Plains properties, from Bruce Goad.

The company released a technical report and NI 43-101 resource estimate for Three Bluffs in the spring of 2012 based upon 52,000 m of drilling carried out on the deposit between 1994 and 2011. The Three Bluffs deposit is estimated to contain, within an optimized open pit shell, an indicated resource of 3.6 million tonnes of ore with an average grade of 4.81 g/t Au and an inferred resource of 1.0 million tonnes grading 5.24 g/t Au. An additional indicated resource of 695,000 tonnes averaging 5.43 g/t Au and inferred resource of 3.53 million tonnes at a grade of 5.81 g/t Au has the potential to be extracted by mining underground. In total, the resource includes more than 1.5 million ounces of gold.

North Country Gold carried out a 7,005 m diamond drill program in 2012 at Three Bluffs, which was intended to follow up on positive results from the 2011 drilling. The program was able to extend the depth of known gold mineralization 200 m below previous holes to a vertical depth of at least 500 m; the deposit remains open at depth. Best results from the drilling include 6.74 g/t Au over 17.4 m from hole 12TB134, 11.95 g/t Au over 9.0 m from 12TB137 and 7.71 g/t Au over 6.0 from 12TB142. True widths are estimated to be 50 to 60 per cent of the intersected core intervals. The company also made a new discovery of emerald in 2012 at its Anuri prospect. The Anuri prospect, located near the southwest end of the Committee Bay belt, was discovered in 2004. High-grade gold and silver mineralization of up to 291.2 g/t Au and 1,769.5 g/t Ag was identified from a 500 m-wide by 1500 m-long mafic and ultramafic volcanic boulder train. Initial drilling took place at the prospect during 2006; gold and silver mineralization was intersected within komatiites in zones of alteration and quartz veining. Drilling returned best results of 3.75 g/t Au, 63.7 g/t Ag, 0.75% Cu, and 158.2 parts per million (ppm) Bi over 10.2 m. While investigating highly elevated beryllium values, emerald was identified. This discovery represents one of only a handful of emerald occurrences known in Canada. Further work will be required to evaluate the potential of this discovery.

227[1] 228[2] 229[3] 230[4]	HOPE BAY (BOSTON[1], CHICAGO[2], DORIS[3], MADRID[4])
Operator/Owner	Hope Bay Mining Ltd.
Commodity	Gold
NTS	760/08, 760/09, 760/10, 760/15, 760/16, 77A/03
Land Tenure	Crown, Surface IOL, Subsurface IOL
Location	170 km southwest of Cambridge Bay[1], 180 km south of Cambridge Bay[2], 125 km southwest of Cambridge Bay[3], 130 km southwest of Cambridge Bay[4]

The Hope Bay gold project is 100 per cent owned by Hope Bay Mining Ltd. (HBML), a subsidiary of Newmont Mining Corporation. The project covers most of the 80 km-long and 7 to 20 km-wide Hope Bay greenstone belt, and comprises a collection of Crown mineral leases and claims, as well as Nunavut Tunngavik Incorporated (NTI) Exploration Agreements.

The Hope Bay belt sits within the Bathurst structural block of the northeast Slave Province, and is isoclinally folded with belt-parallel shear zones. Multiple Archean lode gold deposits are known within the belt, including the Doris and Boston deposits, and a collection of deposits and mineralized zones within the Madrid Trend. Gold deposits within the Hope Bay belt are generally associated with large-scale regional structures.

A $147 million exploration and development program was carried out on the project in 2011 and included underground development at the Doris North deposit, 91,000 m of drilling across the project, and geological mapping and geophysical surveys.

At the beginning of 2012, HBML was engaged in an overall plan of phased-development for its assets within the Hope Bay greenstone belt. Phase 1 included development of the Doris deposits, as well as an exploration decline at Patch 14 within the Madrid Trend. Phase 2 included belt-wide production with mining at Boston and within the Madrid Trend. However, in January, Newmont announced the project was being put on 'care and maintenance' status and that the Hope Bay project was not included in the company's 2017 strategic growth plan or 2012 capital expenditure outlook. HBML (Newmont) has announced that it will continue with the permitting process currently underway for Phase 2 development.

No exploration was carried out at the site in 2012. Work involved preparing the site for care and maintenance, including removal of equipment from the properties. TMAC Resources Inc. signed a binding Letter of Intent with the company in December 2012 to acquire the Hope Bay project. The letter is subject to a number of conditions and will terminate March 31, 2013 unless an agreement is reached.

X231[1] 232[2]	LUPIN MINE[1], ULU[2]
Operator/Owner	Elgin Mining Inc.
Commodity	Gold
NTS	76E/10, 76E/11, 76E/14[1]; 76L/14, 76L/15[2]
Land Tenure	Crown[1], Subsurface IOL[2]
Location	280 km southeast of Kugluktuk[1], 200 km southeast of Kugluktuk[2]

Elgin Mining Inc. acquired the past-producing Lupin gold mine and the Ulu gold project from MMG Resources Inc. in 2011. The Lupin deposit was discovered in 1961, and was in production from 1982 to 1998, and again from 2000 to 2005. Total past production is estimated at 3.36 million ounces of gold at an average grade of 8.9 g/t.

Gold mineralization in the Lupin deposit is hosted in silicate facies BIF occurring within turbiditic sediments of the Archean Contwoyto Formation. The Lupin deposit has been folded into an 'M' shape, consisting of a central syncline flanked by anticlinal limbs. Most of the gold was hosted in the west limb of the syncline (Centre Zone) and in the west limb of the eastern anticlinal structure (East Zone), but additional gold mineralization is located in the west limb of the western anticline (West Zone, West Zone South of Shaft (WZSOS)). Past work on the property has focused on areas that returned high responses to magnetic and EM geophysical surveys. However, subsequent work has shown that the main Lupin outcrop and other gold-bearing occurrences give minimal responses to these techniques. Consequently, Elgin is also exploring de-magnetized iron formations for gold mineralization.

After acquiring the property and winterizing the Lupin camp and facility, Elgin initiated a diamond drill program in the autumn of 2011. The focus of this drilling was WZSOS; this mineralized zone received limited exploration and development by past operators. Elgin published a NI 43-101-compliant resource estimate for WZSOS in early 2012 based upon 165 drill holes extracted from an historic drilling database for Lupin. The estimate includes two scenarios: the base case assumes that all mining activity at Lupin was properly recorded; while the second case recognizes that there is uncertainty as to whether mining took place on

Ulu site from air
Courtesy of AANDC

WZSOS and assumes that this mining was not reported. The base case estimates inferred resources for WZSOS of 1.11 million tonnes of ore at an average grade of 11.32 g/t Au, for 403,000 ounces of gold. If the second case is true and there was unreported mining of WZSOS, it is estimated that up to 10 per cent of WZSOS resources may have been mined but not recorded; the revised resource figure for this scenario includes 1.03 million tonnes of inferred resources at an average grade of 10.73 g/t Au, totalling 354,000 ounces of gold. The updated NI 43-101 resource estimate does not include any of the drilling conducted in 2011 and 2012.

The drilling into WZSOS in late 2011 and early 2012 primarily targeted the near-surface extension of the zone to establish continuity of mineralization to surface. Highlights of this drilling include 22.45 g/t Au over 5.1 m, 21.66 g/t Au over 3.2 m, and 9.56 g/t Au over 5.3 m from three holes. To follow-up on the successful program on this zone, the company has announced plans to re-open the mine portal to allow for underground drilling on this zone over the winter. Drilling also targeted the L19 Zone, a folded limb of the Lupin BIF that occurs approximately 200 m east of the East Zone. As with WZSOS, L19 Zone was drilled by previous operators, but not well defined. Highlights of Elgin's drilling into this zone include 10.34 g/t Au over 8.5 m from drill hole L12025 and 5.58 g/t Au over 15.2 m from hole L12027; this latter hole also intersected a deeper interval of 4.97 g/t Au over 7.1 m.

During the summer, airborne geophysical surveys were flown over the entire property to assist in the identification of regional targets. Elgin also conducted a drill program focused on the Boot Lake, L4, L22, L26, L30, L34, Sep Lake, Post Lake, and Occ 8 regional targets. No results from this program have been released to date.

Elgin entered into an agreement with North Arrow Minerals Inc. that would allow Elgin to earn an interest in North Arrow's Contwoyto properties, comprising six blocks of mineral claims and leases in the area of or adjoining the Lupin property. Under the terms of the agreement, Elgin can earn a 60 per cent interest in these properties by spending $6 million over six years. The regional airborne geophysical survey, carried out by Elgin during the summer, included portions of the Contwoyto properties.

The Ulu project is located 155 km north of Lupin, and has had extensive exploration and development work conducted on the property by previous operators. This work has included more than 135,000 m of drilling and 1.7 km of underground development. The focus of previous work has been the Flood deposit, which hosts gold mineralization within shear-hosted

Sampling trench in mineralized outcrop, Lupin project

quartz veins. A NI 43-101-compliant resource for the deposit, based upon past work, estimates an indicated resource of 751,000 tonnes at an average grade of 11.37 g/t Au, and an inferred resource of 418,000 tonnes at an average grade of 10.61 g/t Au. During 2012, Elgin carried out surface exploration and diamond drilling on the property. The exploration program included a ground geophysical survey, and mapping and sampling over potential targets. The drill program was planned to complete in-fill and step-out holes on the main Flood Zone to further define and expand the resource. No results from these programs at Ulu have been released.

233	ORO
Operator, Partner	North Arrow Minerals Inc., Sennen Resources Ltd.
Commodity	Gold
NTS	77A/03, 77A/06
Land Tenure	Crown, Surface IOL
Location	115 km southwest of Cambridge Bay

The Oro project covers the northern 10 km of the Hope Bay greenstone belt, is proximal to the Doris North deposit operated by Hope Bay Mining Ltd, and is made up of five mineral leases with a combined area of 4,102 ha. The project is 100 per cent owned by North Arrow; an option agreement

signed in 2011 allows Senner Resources to earn a 60 per cent interest in Oro by funding a $5 million exploration program over five years.

During the 2011 program, North Arrow completed 11 diamond drill holes totalling 1,225 m at Oro. The program was designed to test the gold mineralization potential of a 300 m strike-length of the Elu shear zone. Ten of the holes intersected the Elu shear zone and gold mineralization, with best results of 4.91 g/t Au over 7.6 m and 20.22 g/t Au over 2.0 m. This mineralized zone remains open to the north, south, and at depth.

No exploration was carried out at Oro during 2012.

234	WISHBONE GOLD
Operator/Owner	Sabina Gold & Silver Corp.
Commodities	Copper, Silver, Zinc, Lead, Gold
NTS	76F/09, 76F/16, 76G/02, 76G/03, 76G/05, 76G/06, 76G/12, 76G/13
Land Tenure	Crown, Surface IOL
Location	425 km southeast of Kugluktuk

The Wishbone Gold property comprises 123 mineral claims with a total area of 108,550 ha within the eastern extension of the Hackett River greenstone belt. As part of the 2011 sale of the Hackett River project, 132 claims of the initial Wishbone property were transferred to Xstrata Zinc Canada from Sabina Gold and Silver Corp. A further 48 claims were viewed by Sabina as being prospective for BIF-hosted gold mineralization and having analogous geology to the Back River project; these claims were retained by Sabina. The company carried out additional staking in 2011 to bring the Wishbone Gold property to its current size.

The Lucky 7 trend was identified at Wishbone Gold in 2011. One drill hole (SWB-11-07) targeted a regionally-extensive horizon that can be traced for more than 60 km, and intersected two zones of gold mineralization with grades of 71.30 g/t Au over 1.5 m and 3.35 g/t Au over 14.7 m. The 2012 work program was designed to follow-up on these results and to test other targets, with similar geophysical signatures, along the Lucky 7 trend. Surface exploration was also carried out on the claims staked in 2011.

A total of 7,479 m of diamond drilling in 33 holes was carried out on the Wishbone Gold project in 2012. In addition to the drilling at the Lucky 7 prospect, other drilling was conducted at the Tauntaun prospect along the Lucky 7 trend, at Rocky (previously drilled in 2011), and at Haunaco, a Lucky 7-style target close to Rocky. No results from the 2012 drilling have been publically released, but the company has indicated that encouraging results were returned from the Lucky 7 and Rocky targets that warrant follow-up.

The surface exploration program at Wishbone Gold included geophysical surveys at the Lucky 7 and Hawaii prospects; a structural interpretation of the Rocky prospect; geological mapping and sampling at Lucky 7, Dark Side, Hawaii, and Hawaii South; and prospecting and sampling on the Malley property. In total, 596 grab samples were collected as part of the surface exploration, and 785 soil samples were collected from the Dark Side, Tauntaun, Hawaii, and Haunaco prospects. Anomalous gold values were returned from grab samples collected at Dark Side, the Hawaii prospects, and the Malley property, and from soil samples at Dark Side, Tauntaun, and Hawaii. Weak base metal anomalies were also returned from Haunaco.

Goose tracks
Courtesy of Alloy 20

INACTIVE PROJECTS

North Arrow Minerals Inc. controls three projects in the Kitikmeot that were not active this year, including the **Anialik** and **Bamako** (referred to previously as Canoe Lake) base metal-gold projects, and the **Torp Lake** lithium project. A small prospecting program was carried out at Anialik in 2011, which returned values of up to 11.2 g/t Au. The last reported work at Torp Lake was a channel sampling program in 2009 with results of up to 4.5% Li_2O over 6 m.

The **Gondor** copper-lead-zinc project is controlled by MMG Resources Inc. The last reported exploration program on the property was in 2010, when geophysical surveys, prospecting, and till sampling were carried out. MMG also controls the **High Lake East** VMS project; exploration work was carried out on the project in 2010 and 2011, but no results have been reported.

Exploration was not conducted in 2012 at the **Amaruk** and **Hepburn** diamond projects, or the **Amaruk Gold** and **Halkett Inlet** gold projects controlled by Diamonds North Resources Ltd. Work programs were last carried out at Amaruk, Amaruk Gold, and Halkett Inlet in the eastern Kitikmeot Region in 2011, but no results from those programs have been released. No diamond exploration has been carried out at Hepburn, which straddles the Nunavut-Northwest Territories border, in recent years, but the company did carry out base metal exploration in the NWT portion of the project in 2011.

Diamonds North also optioned the **Barrow** diamond project, adjacent to Amaruk, from Bluestone Resources Inc. (formerly Indicator Minerals Inc.) in 2011. The option agreement would allow Diamonds North to earn up to a 60 per cent interest in Barrow by spending $2 million exploring the property over five years, including $50,000 by the end of 2011. It has not been reported whether this spending target was met. Diamonds North re-directed its exploration efforts in 2012 to projects outside of the territory. Bluestone Resources also controls the **Grail** diamond project on the Boothia Peninsula in the northeastern Kitikmeot.

A joint venture agreement involving Shear Diamonds Ltd. and Rio Tinto Exploration Canada Inc. controls the **TAK** diamond property (referred to previously as Rockinghorse). Work on the property was last reported in 2007, when a previous operator collected a mini-bulk sample from the Anuri kimberlite. The joint venture partners processed the sample in 2011, and reported diamond recoveries of up to 0.35 carats per tonne. Twenty-one mineral claims within the TAK property were allowed to lapse in 2012; the core mineral leases have been retained.

Hope Bay Mining Ltd. acquired 40 mineral claims in 2011 over the **Elu Belt** gold project, which is analogous to that company's Hope Bay greenstone belt. Reconnaissance exploration was carried out on the project in 2011, but no details or results of that work have been reported.

Northrock Resources Inc. conducted a prospecting program at its **Turner Lake** gold project in 2011, to evaluate pegmatite rocks on the property for rare earth elements. No results of this work have been reported.

Hornby Bay Mineral Exploration Ltd. owns the **Coppermine** uranium project. The company completed a drill program in 2010, and planned a follow-up seismic survey to assist with drill targeting. No further work has been reported.

Helicopter slinging core boxes
Courtesy of AANDC

KITIKMEOT REGION

INACTIVE PROJECTS

Number	Project	Operator
BASE METALS		
126, 127	Anialik, Bamako	North Arrow Minerals Inc.
128	Gondor	MMG Resources Inc.
129	High Lake East	MMG Resources Inc.
DIAMONDS		
185	Amaruk	Diamonds North Resources Ltd.
186	Barrow	Diamonds North Resources Ltd.
187	Grail	Bluestone Resources Inc.
188	Hepburn	Diamonds North Resources Ltd.
189	TAK	Shear Diamonds Ltd.
GOLD		
244	Amaruk Gold	Diamonds North Resources Ltd.
245, 246	Anialik, Bamako	North Arrow Minerals Inc.
247	Elu Belt	Hope Bay Mining Ltd.
248	Halkett Inlet	Diamonds North Resources Ltd.
249	Turner Lake	Northrock Resources Inc.
LITHIUM		
309	Torp Lake	North Arrow Minerals Inc.
URANIUM		
399	Coppermine	Hornby Bay Mineral Exploration Ltd.

Please refer to the map on page 19 for the location of inactive projects in the Kitikmeot region.

KIVALLIQ REGION

OVERVIEW

The Kivalliq region comprises a large part of the mainland to the northwest of Hudson Bay, the offshore islands, such as Southampton Island, and shares a border with the Northwest Territories and Manitoba. The smallest of the three regions, the Kivalliq covers an area of 445,100 square kilometres. Mineral exploration companies regularly use Rankin Inlet or Baker Lake as staging points for their activities. Other communities in the region, Arviat, Chesterfield Inlet, Coral Harbour, Repulse Bay, and Whale Cove, also benefit from exploration activities as the need for services and facilities grows. The Kivalliq region received significant investment for mineral resources in 2012, primarily for gold and uranium exploration and for the development of infrastructure related to mining.

Archean-Proterozoic rocks of the Western Churchill Geological Province (Rae and Hearne domains) and Paleozoic strata of the Hudson Bay Lowland Geological Province underlie much of the region. Mineral deposits and occurrences in the Kivalliq region contain mineralization of gold, uranium, nickel-platinum group elements (PGE), lead-zinc-copper-silver, rare earth elements (REE), and diamonds.

There is one active mine in Nunavut, the Meadowbank gold mine, located 80 kilometres (km) north of Baker Lake. The Meadowbank mining operation and related construction projects employ a workforce of approximately 1,200 people and support a variety of secondary businesses in Baker Lake and elsewhere within Nunavut. Over the past year, Agnico-Eagle Mines Ltd. (AEM), the owner of Meadowbank, has made investments to improve operational efficiencies at the open pit mine and ore processing facility. AEM's other Kivalliq-based gold project, Meliadine, lies 25 km north of Rankin Inlet. In 2012, the company ran an expanded drilling and exploration program bolstered by favourable gold results. This year AEM also began construction on a 23-km all-weather access road from Rankin Inlet to the project site at Meliadine Lake.

The Proterozoic Thelon Basin is considered to have strong potential for economic unconformity-type uranium deposits similar to those found in the Athabasca Basin of Saskatchewan. The Kiggavik project is located west of Baker Lake and is considered the most advanced uranium prospect in Nunavut. The operator, AREVA Resources Canada, is advancing the Kiggavik uranium project through the environmental assessment process and the technical review of the draft environment impact statement is expected to commence in early 2013.

Favourable geology and promising company exploration results have contributed to ongoing prospecting and exploration activities in the region. Forecasts of an increased demand for uranium in the medium- to long-term, as well as the continued strong price of gold, have sustained interest and investment in many properties with known mineral occurrences. Sixteen prospecting permits of the 109 issued by Aboriginal Affairs and Northern Development Canada in 2012 are located in the Kivalliq region.

Angilak property, Nutaaq camp in summer
Courtesy of Kivalliq Energy

Kivalliq Region
50 25 0 50 100
Kilometres
Projection: Canada Lambert Conformal Conic, NAD 83
Taloyoak
Kugaaruk
Igloolik
Rowley I.
Hall Beach
Prince Charles Island
Wales I.
Queen Maud Gulf MBS
Qilalugaq
489
Repulse Bay
FOXE BASIN
Ukkusiksalik NP
Nanuq North
461
460
Nanuq
672
Amer Lake
641
Nunavut Rare Earth
548
Muskox
522 Meadowbank Mine
Greyhound Lake
401
Inuujaarvik TP
Thelon Basin
679
Turqavik
Kivalliq
Thelon WS
671
677
Aberdeen
670
674
675
676
Baker Lake
Kiggavik
678
Nunavut Rare Earth
542
North Thelon
521
Nutaaq
Mallery Lake
Churchill
Chesterfield Inlet
Churchill West
489
487
Meliadine
Peter Lake
545
523
Ferguson Lake
610
Qamanirjuaq CPMA
RB
Rankin Inlet
Angilak
673
Angikuni Lake
546
544
545
400
526
525
Pistol Bay
Whale Cove
ATLAS-1
Nowyak
524
Esker
550
547
Maguse River
Arviat
McConnell River MBS
527
Windy Gold
520
Kiyuk
699
Nueltin Lake
640
Nunavut Rare Earth
MANITOBA
Southampton
611
SOUTHAMPTON ISLAND
Coral Harbour
East Bay MBS
Harry Gibbons MBS
Coats Island
Mansel Island
LEGEND
Commodity Groupings
Base Metals
Coal
Diamond
Gemstone
Gold
Iron
Lithium
Nickel-Copper-PGE
Rare Earth Elements
Uranium
Active Mine
Inactive Mine
Symbol with no fill means INACTIVE.
Bold project number and name signifies major or advancing project.
Areas with Surface and/or Subsurface Restrictions
CPMA Caribou Protection Measures Apply
MBS Migratory Bird Sanctuary
NP National Park
NWA National Wildlife Area
TP Territorial Park
WP Wildlife Preserve
WS Wildlife Sanctuary
Inuit Owned Lands (Fee simple title)
Surface Only
Surface and Subsurface
Geological Mapping Programs
Canada-Nunavut Geoscience Office
(See master legend for details)
Boundaries
NLCA Nunavut Settlement Area
Nunavut Regions
NILCA Nunavik Settlement Area
Provincial / Territorial
Transportation Routes
Meadowbank Road
Milne Inlet Tote Road
Yellowknife-Contwoyto Winter Road
Proposed Bathurst Inlet Port and Road
Proposed Izok Corridor Road
Proposed Steensby Inlet Rail Line

BASE METALS

400	ATLAS-1
Operator/Owner	Anconia Resources Corp.
Commodities	Zinc, Lead, Silver, Gold, Copper
NTS	55L/11, 55L/12
Land Tenure	Crown, Surface IOL
Location	165 km west of Whale Cove

Anconia's Atlas-1 project (formerly named Marce) is situated west of Whale Cove and covers a group of claims totaling 10,434 hectares (ha). Exploration on the property in 2012 included ground geophysical surveys (horizontal loop electromagnetic (EM) and magnetic) to provide more detail over targets identified from a 2011 airborne geophysical survey that tested the extent of exposed volcanogenic massive sulphide (VMS) mineralization. Four conductors were identified over a distance of 3.2 km along a northeast-trending zone with steeply north-dipping stratigraphic units. The zone also includes a strong conductor, more than 1.3 km in length, related to the original Marce occurrence. The conductors are interpreted to be associated with a gravity anomaly.

Gossanized outcrop, Greyhound Lake property
Courtesy of Anconia

In 2012, the company completed a total of 1,790 m of drilling in 12 holes to test a number of targets on the property. These are the first drill holes on the property and results confirm that the mineralization represents a stratiform zinc, lead, silver, gold, and copper bearing VMS system. Assay results returned significant base and precious metal enrichment in 11 of the 12 holes at Atlas-1. One hole (MRC-12-08) intersected 113.0 grams per tonne (g/t) Ag and 6.97% Zn over 9.8 metres (m); MRC-12-04 yielded 1.59 g/t Au, 152.9 g/t Ag, 1.1% Cu, and 1.06% Zn over 8.4 m; and hole MRC-12-04 yielded 11.19 g/t Au, 1,348 g/t Ag, 1.98% Pb, and 3.74% Zn over 3.6 m. These results indicate anomalously high gold and silver mineralization for a typical VMS deposit, suggesting that a second stage of mineralization may have overprinted the original one.

From the limited drilling completed, Atlas-1 remains open along strike, and hosts mineralization exposed at surface to depths of at least 200 m. A well-defined footwall of altered felsic rocks is overlain by massive sulphide and sulphide stringer mineralization as laterally extensive units; the mineralized horizon is overlain by unaltered mafic volcanic, siliceous exhalite, and iron formation rocks.

The Zac occurrence, situated 20 km northeast of Atlas-1, also has a number of geophysical targets interpreted from airborne surveys, suggesting that additional mineralization may be found in the greenstone belt within the area.

401	GREYHOUND LAKE
Operator/Owner	Aura Silver Resources Inc.
Commodities	Copper, Lead, Zinc, Gold, Silver
NTS	56D/12, 56D/13, 66A/09
Land Tenure	Crown
Location	40 km north of Baker Lake

Aura Silver Resources Inc.'s Greyhound Lake base metal project comprises 57 mineral claims, located to the east and west of the all-weather access road from Baker Lake to the Meadowbank gold mine.

Historical results from the area have returned mineralization of base metals, gold, and silver, with values up to 8.2% Pb, 18.5% Zn, 9.2% Cu, 3,080 g/t Ag, and 28 g/t Au. The mineralization is generally hosted in carbonate-iron

formations interlayered within Archean volcanic-sedimentary rock sequences. The iron formations contain minor sulphide mineralization.

Aura completed field programs on the property in 2010 and 2011. The 2010 program consisted of an induced-polarization geophysical survey to identify targets for drill testing. In 2011, the company followed up with a 40 line-km ground geophysical survey, as well as soil sampling, prospecting, mapping, and diamond drilling. The drilling identified four prospects: North Gossan, JohnPaul, Bandit, and Silver in the northeast section of the property. Grab samples from these prospects returned significant results. A sample of sulphidized iron formation from JohnPaul assayed at 6.47 g/t Au and samples from Silver returned 39.6 g/t Ag.

In May of 2012, the company released results from soil-gas hydrocarbon geochemical analyses that confirmed the precious metal mineralization potential of the property. No other work was carried out on the property.

DIAMONDS

460	NANUQ
Operator/Owner	Peregrine Diamonds Ltd.
Commodity	Diamonds
NTS	56G/01, 56G/02, 56G/06 – 56G/11
Land Tenure	Crown
Location	270 km northeast of Baker Lake

Peregrine Diamonds Ltd.'s Nanuq project covers about 167,642 ha on Crown land. Peregrine's exploration on the property began in 2007, with the identification of several high-potential kimberlite targets. Drilling confirmed three diamondiferous kimberlites on the property: the largest, Naturalik, has a surface area of seven hectares; the second largest, Kayuu, has an area of five hectares; and the smallest, Tudlik, is one hectare in area. Naturalik and Kayuu have radiometric ages of 80 and 70 Ma, respectively.

The company continued work in 2011, but no results were released. No work was done on the property in 2012.

Arctic hare and core storage
© Nunavut Arctic College

461	NANUQ NORTH
Operator, Partners	Bluestone Resources Inc., Peregrine Diamonds Ltd., Hunter Exploration Group
Commodity	Diamonds
NTS	56G/07, 56G/10, 56G/11
Land Tenure	Crown
Location	280 km northeast of Baker Lake

Nanuq North is a joint venture project between Peregrine Diamonds Ltd., Bluestone Resources Inc. (formerly Indicator Minerals Inc.), and Hunter Exploration Group. Sixteen claims on the project are split between Peregrine and Bluestone, both with 40 per cent ownership, and Hunter Exploration with 20 per cent. The remaining 35 claims are split evenly between Peregrine and Bluestone, who share the operating costs of the project.

One diamondiferous kimberlite, NQN-001, was discovered on the property and more than four tonnes of material has been recovered from it. Two kimberlite phases were identified in the recovered material, and microdiamond analysis results were released in 2009 and 2010.

Peregrine operated a $250,000 program in 2011 that included a limited drill program on one target, which did not intersect kimberlite. No work was planned on the property in 2012.

GOLD

520	KIYUK
Operator/Owner	Prosperity Goldfields Corp.
Commodity	Gold
NTS	65C/07 – 65C/10
Land Tenure	Crown
Location	350 km west of Arviat

The Kiyuk gold project, located in the southwestern Kivalliq, covers 98,800 ha of Crown land and is owned by Prosperity Goldfields Corp. There are currently five known prospects on the project: Rusty, Gold Point, Cobalt, Amundsen, and North Snake.

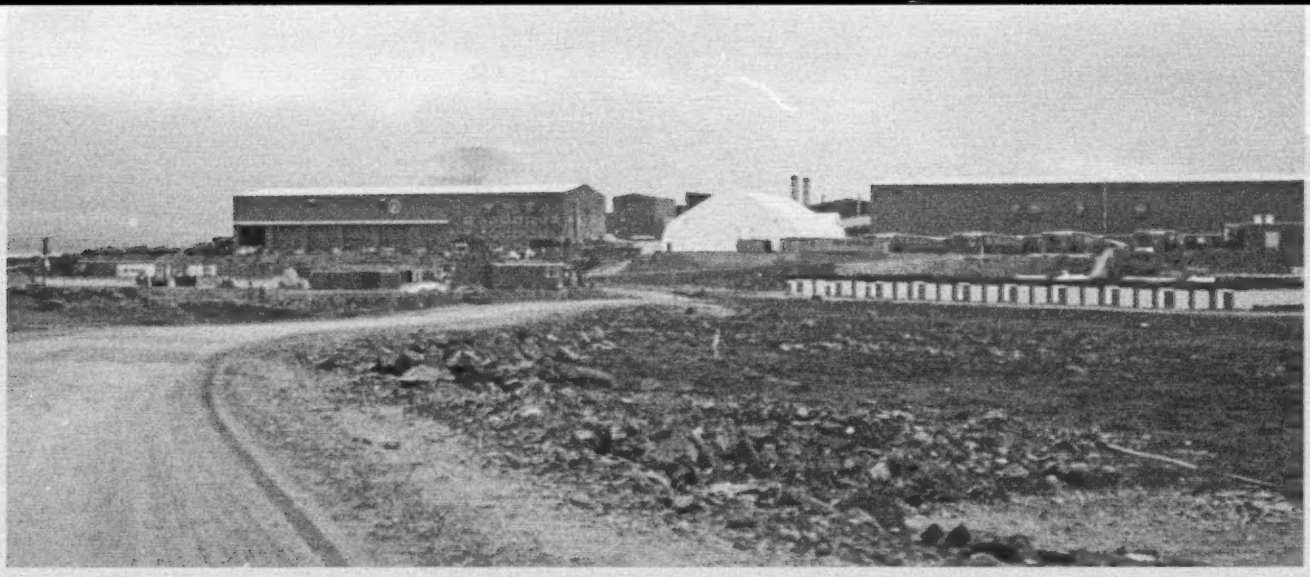
Gold mineralization at Kiyuk was first discovered in the early 1990s, and occurs in a sequence of conglomerates and breccias located along an unconformity between two thick sedimentary units: the underlying Hurwitz Group and the overlying Kiyuk Group. The host rock varies from a brecciated sandstone (at Rusty), to altered felsic volcaniclastic rocks (at Cobalt, Amundsen), to an altered polymictic conglomerate (at Gold Point). The gold mineralization is commonly associated with strong albite-magnetite and albite-actinolite-quartz-carbonate alteration of the host rocks, but also occurs as native gold grains.

Prospecting, geochemical sampling, and a drill program in 2011, returned significant results on the Rusty, Gold Point, and Cobalt prospects. Some results from the drill program included intervals of 157.6 m at a grade of 1.70 g/t Au from the Rusty prospect, 63.6 m of 2.84 g/t Au from Gold Point, and 32.1 m of 1.82 g/t from Cobalt. The company planned an extensive drill program for 2012, and in early March drilled 12 holes and completed an airborne magnetic survey over the property. Most of the drilling occurred on the Gold Point and Cobalt prospects, with one hole on a newly discovered mineralized zone, Amundsen, located one kilometre south of Cobalt. Results reported from this winter program included 12 m at 2.3 g/t Au from Amundsen, 12 m at 3.9 g/t Au from Gold Point, and 18 m at 1.36 g/t Au from Cobalt.

The summer field program included mapping and prospecting, as well as ground validation of a glacial geology map of the property, with the goal of defining drill targets for the 2013 season. Five hundred and thirty-nine regional till samples were collected from across the property, and some detailed till and grab sampling was carried out at Amundsen and the newly identified North Snake prospect.

In late September, Prosperity announced initial results from the 2012 season. Highlights included a new surface showing, Rasmussen, where grab samples returned assay values up to 6.96 g/t Au, and several potential targets were identified through surface prospecting and till sampling. In November, the company released results from the till sampling program, reporting that many of the gold grains from the Rusty and Cobalt showings have pristine shapes, indicating limited transport distance from the bedrock source.

Soil sampling at Kiyuk
Courtesy of Prosperity Goldfields



Meadowbank mine site from the Meadowbank road
Courtesy of AANDC

521	MALLERY LAKE
Operator/Owner	Uranium North Resources Corp.
Commodity	Gold
NTS	650/09, 650/10, 650/15, 650/16
Land Tenure	Crown
Location	130 km southwest of Baker Lake

The Mallery Lake property is a 15,930 ha claim block with well-exposed gold and silver-bearing quartz veins up to 20 m-wide. This extensive vein system is hosted in Early Proterozoic rhyolite flows of the Wharton Group. Four areas have been the focus of exploration work: the Central Stockwork Zone, the Tundra Zone, the Eastern Zone and the Western Zone. Veins with high gold values have been historically documented and a grab sample collected in 2010 yielded 54.2 g/t Au and 272 g/t Ag. Composite chip sampling of the surrounding rhyolite returned assay results of 2.19 g/t Au over a distance of 8.0 m and another composite chip sample returned 1.45 g/t over 3.0 m. These significant results from the host rock suggest there is potential for larger volumes of mineralization and potentially other mineralized zones.

In January 2012, Uranium North Resources released results from five holes (750 m) of drilling conducted in 2011. Mineralization was encountered in all five holes. At Stockwork, hole ML-11-01 yielded assay results of 4.62 g/t over 3.0 m and hole ML-11-04 returned 2.9 g/t over 4.0 m. Vein quartz and silicified rock covers an area of at least 700 by 800 m. These characteristics suggest, combined with the drilling confirming mineralization at depth, that the Mallery Lake may be a large epithermal gold system, and that the four discovered zones may be only part of a larger deposit. No follow-up work was reported for the 2012 field season.

522	MEADOWBANK MINE
Operator/Owner	Agnico-Eagle Mines Limited
Commodity	Gold
NTS	56D/13, 56E/04, 66A/16, 66H/01, 66H/02
Land Tenure	Crown, Subsurface IOL
Location	75 km north of Baker Lake

The Meadowbank gold mine is owned by AEM and started commercial production in 2010. The company owns five operating gold mines, three in Canada and two abroad. This year, Meadowbank became AEM's largest gold producer. As the only operating mine in Nunavut, Meadowbank has a workforce of about 1,200 people, of which 35 to 40 per cent are from communities across the Kivalliq region.

The Meadowbank property hosts the Goose Island, Portage, and Vault deposits, which collectively form the Meadowbank mine plan. The Goose Island and Portage deposits and the mine infrastructure are on Crown Mining Leases. The Vault and PDF deposits are on Inuit Owned Lands (IOL) and under NTI Exploration Agreements. To the west and south of the known deposits, further exploration potential exists within the Meadowbank and Tehek mineral claim blocks, which make up almost one-third of the 66,933 ha property.

The geology of the Meadowbank mine comprises Archean quartzite, iron formation, ultramafic rocks, and felsic to intermediate volcano-sedimentary sequences of the Woodburn Lake Group. The Goose Island and Portage deposits are hosted by a magnetite-rich iron formation, whereas an assemblage of intermediate volcanic rocks hosts most of the mineralization at the Vault and PDF deposits.

All the host rocks and associated gold deposits are at the greenschist to amphibolite grade of metamorphism, tightly folded, structurally complex, and occur between regional-scale granitic plutons. The gold is associated with pyrite and pyrrhotite mineralization replacing magnetite in the iron formation. The mineralized iron formation occurs along two regional structural trends, the Meadowbank Trend with the Goose Island, Portage and Vault deposits, and the Pipedream Lake Trend that hosts the PDF deposit.

The Goose Island gold deposit is associated with iron formation that strikes southerly and can be traced for more than 750 m. The units are steeply dipping to the west and splay at depth to 500 m. The mineralized zone has a true thickness that varies between three to twelve metres and can be as thick as 20 m. The Portage deposit is located 500 m north of the Goose Island deposit in similar host rocks, which are tightly folded along a north-northwest-trending direction. This deposit can be traced for a length of 1.85 km and both limbs of the fold dip moderately to the west. Mineralization in the lower limb is typically six to eight metres thick and can attain thicknesses of up to 20 m in the hinge zone.

The Vault deposit, located three kilometres northeast of the Portage pit, is gently dipping, sericitized and silicified over a width of several metres. It is continuous for several hundred metres along sheared horizons that host the mineralization as disseminated sulphides. The main gold-bearing zone is typically eight to twelve metres thick and mineralized lenses in the hanging wall can be three to five metres thick.

AEM faced numerous challenges in 2011 and 2012 at Meadowbank that affected profitability. Escalating operating costs prompted a technical and operational review, which led the company to take steps to address the challenges and implement a number of improvements, including a new pit outline and higher cut-off grades. As a result, proven and probable open pit reserve estimates were downwardly revised early in 2012 by 1.3 million ounces. New proven and probable reserve estimates are 2.2 million ounces of gold from 24.5 million tonnes of ore grading 2.8 g/t Au. Similarly, indicated and inferred open pit and underground resource estimates are now at 21.0 million tonnes combined, with an average grade of 2.6 g/t Au, for a projected total of 1.8 million ounces of gold.

In the first nine months of 2012, Meadowbank produced 288,792 ounces of gold, almost achieving its annual anticipated production target of 295,000 ounces. The gold was produced at total cash costs of $836 per ounce, a lower cost than the $1,040 total cash cost per ounce anticipated at the start of the year. These figures are in contrast to the first nine months of 2011 when the mine produced 199,254 ounces of gold at total cash costs of $969 per ounce. These significant improvements were the result of mined grades being 22 per cent higher in the comparable period this year, due to higher-than-expected grades in the newly opened Goose pit and the new mine-life plan, completed in January, which reduced ore dilution.

Increased productivity has also been credited to optimization of the permanent secondary crusher for the mill (installed in June 2011). This crusher has generated record throughputs in each reported quarter. The mine processed 2,791,000 tonnes of ore in Q1 to Q3 of 2012 for an average of 10,186 tonnes per day (10,902 tonnes per day in Q3 2012).

Current mining operations at Meadowbank are confined to the Portage and Goose Island pits. Additional exploration work for resource conversion began in April, with the aim of extending the Goose deposit southward into the deeper Goose South deposit and extending the Vault deposit towards the east and southwest. The current mine-life is estimated to extend through 2017.

523	MELIADINE
Operator/Owner	Agnico-Eagle Mines Limited
Commodity	Gold
NTS	55J/13, 55J/14, 55K/16, 55N/01, 55N/02
Land Tenure	Crown, Subsurface IOL
Location	20 km north of Rankin Inlet

The Meliadine project is located south of Meliadine Lake (north of Rankin Inlet) and is owned by AEM. The property covers 56,092 ha and the mineral tenure is comprised of Crown mineral claims (50,334 ha), Crown mineral leases (931 ha), and IOL covered by NTI Exploration Agreements (4,827 ha).

The company received approval from the Nunavut Impact Review Board (NIRB) in February 2012 to proceed with the construction of a 23 km all-weather access road connecting the community of Rankin Inlet to the Meliadine property. The total expenditures for Meliadine for 2012 are anticipated to reach $115 million for infrastructure and exploration activities. The infrastructure budget of $52 million included

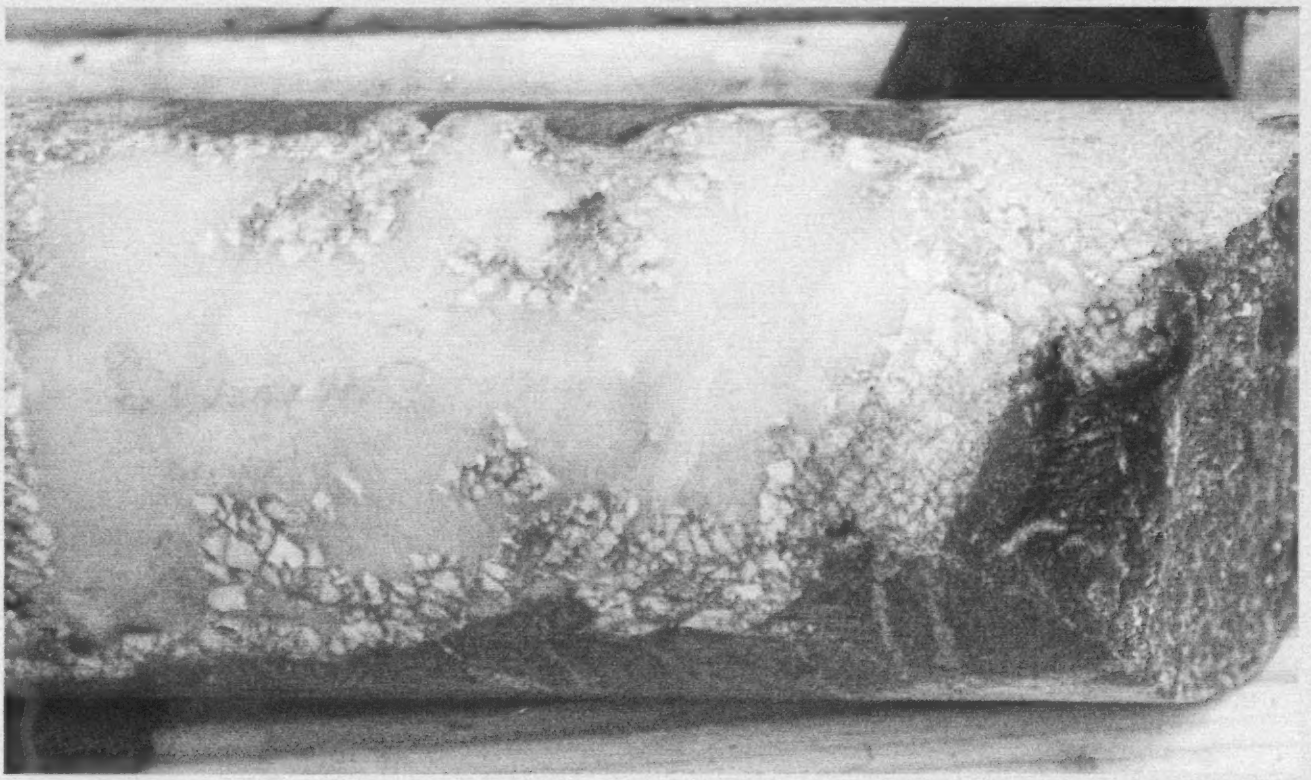
a large portion of the road construction project. The road requires three separate bridges, including one across the Meliadine River. Construction of all three bridges and approximately seven kilometres of road were completed by the fall of 2012, and completion of the 23 km-long road is forecast for April 2013.

The 2012 exploration program was originally budgeted for $40 million and included a supplementary $9.8 million (announced in July) for an expanded grassroots exploration program. Extensive exploration and resource conversion drilling on the property in 2012 has significantly increased the gold reserves. Drilling activities concluded in September. The 2012 exploration program consisted of 55,000 m of greenfield exploratory drilling and 90,000 m of detailed drilling in the known deposits, specifically focusing on the most promising areas of the Tiriganiaq and Wesmeg deposits. A new, deep zone, Normeg, was identified in 2011 and is west of Wesmeg in the direction of Tiriganiaq. The Normeg zone has a strike length of 500 to 700 m and extends from surface to a depth of at least 380 m. Two additional high-grade ore shoots were discovered in 2012.

The Meliadine deposits have proven and probable reserves of 12.5 million tonnes grading at 7.2 g/t Au for a total of 2.9 million ounces of gold; indicated resources of 1.7 million ounces (12.6 million tonnes at 4.1 g/t Au), and inferred resources of 2.4 million ounces (12.7 million tonnes at 6.0 g/t Au).

The principal resources are hosted in several deposits, Tiriganiaq and Wesmeg, F-Zone, Wolf, and Pump, in proximity to the 80 km-long mineralized Pyke fault. Comaplex and Asamera Minerals Inc. found the Discovery deposit in 1989. It lies about 10 km to the southeast of the main deposits, but is not included in the resource calculations. Gold mineralization occurs in highly sheared and complexly folded Archean turbidites, sulphidized iron formation, and volcanic rocks hosting stockwork and laminated vein-quartz or quartz-carbonate systems. Stratigraphic units are overturned, dip steeply to the north, and strike to the west-northwest. Regional gold mineralization appears to be concentrated along a strongly magnetic upper horizon and a weakly magnetic lower horizon. The upper iron formation is an oxide facies formation and hosts the Tiriganiaq, Discovery and Wolf (North) zones. Ninety-seven per cent of the reserves and 62 per cent of the resources lie in the upper zone deposits. The other deposits,

Visible gold mineralization in core from Meliadine
Courtesy of Agnico-Eagle



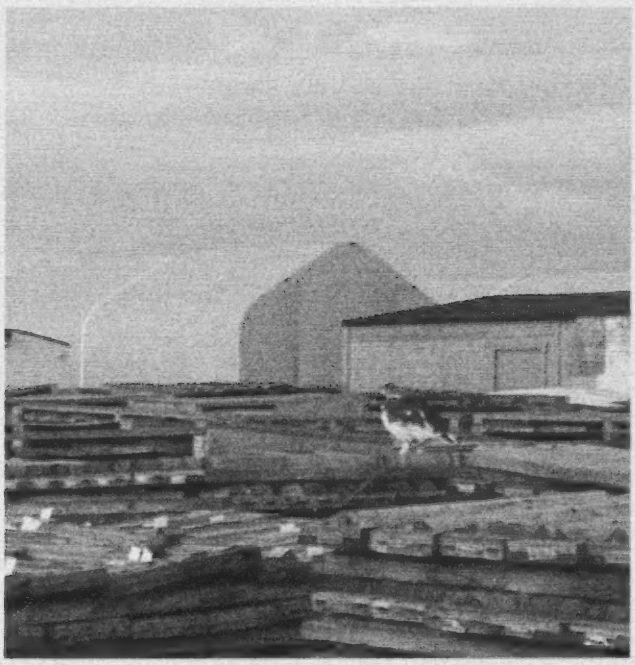
including Wolf (Main), form the lower mineralized horizon within a silicate facies iron formation.

An 8,460 tonne bulk sample was taken underground from the high-grade Tiriganiaq deposit in 2011 and results were incorporated into a mining feasibility study. Analyses from 4,573 tonnes of this bulk sample yielded 13.5 g/t Au, which is six per cent more than what had been predicted from the block model. These results are encouraging, confirm earlier conservative reserve grade estimates, and increase the confidence of the geological model used for reserve and resource estimates. Infill drilling at the Tiriganiaq deposit returned values of 13.5 g/t Au over 10.9 m (estimated true width) at a depth of 305 m. Other drilling confirmed lateral extensions to the deposit: hole M11-1370 yielded 10.4 g/t Au over 12.1 m at 174 m depth on the eastern margin of the resource; and hole M12-1504 returned 15.9 g/t Au for 2.8 m at 47 m depth on the west side. Deeper holes drilled later in the year yielded assay values of 13.8 g/t Au over a true width of 4.0 m at a depth from surface of 525 m. The values from the deeper holes are not considered in the resource assessment study, but confirm additional mineralization at Tiriganiaq, and indicate that the deposit remains open at depth.

In November 2012, AEM announced that the indicated resources of the combined Wesmeg and Normeg zones have increased by 40 per cent over the past year to more than 5.5 million tonnes grading at 2.69 g/t Au for a total of 479,000 ounces of gold. The inferred resources have increased by 85 per cent over the 2011 figures to include more than 5.3 million tonnes grading at 4.43 g/t Au, for a total of 761,000 ounces. These new indicated and inferred results have not been included in the recent resource estimates. However, the proximity and magnitude of these new finds changes the options for open pit and underground configurations. AEM has indicated revised reserve and resource estimates for Meliadine will be released in February 2013.

Known mineralization in F-Zone has been extended through drilling to the west; this mineralization remains open at depth. Holes M12-1758 and M12-1771 intersected high-grade gold values at 523 m and 464 m, respectively, with the latter depth being 150 m below the confirmed resource envelope. Drilling results have also led AEM to consider the Pump zone as two distinct deposits, Pump North and Pump West. Both of these deposits are open along strike and at depth. These new mineralized zones are expected to contribute to AEM's revised resource estimates for Meliadine. The company intends to continue resource conversion drilling efforts as part of the planned activities in 2013. With the current timelines anticipated by AEM for the environmental assessment and regulatory processes, the construction phase for the mine could start in 2014 or 2015, with gold production beginning in 2016.

Ptarmigan on core boxes, Meliadine camp
courtesy of AEM



524	NOWYAK
Operator/Owner	Uranium North Resources Corp.
Commodity	Gold
NTS	65G/15, 65G/16
Land Tenure	Crown
Location	240 km northwest of Arviat

The Nowyak property comprises nine mineral claims and one prospecting permit owned by Uranium North Resources Corp. This project had been previously considered part of the Aura Consolidated Gold project. Multiple gold-silver-copper occurrences are known on the property, including the Garath, Century-Bully, Bonanza, and Esso showings. Gold mineralization is found within the margins of quartz-carbonate veins associated with the Komatik (also referred to as the Nowyak) shear zone, a 40- to 80 m-wide, 20 km-long, sericite-carbonate-pyrite-altered structure. The Komatik

Pistol Bay camp
Courtesy of AANDC

shear zone is found at or near the contact between the Carnecksluck intrusive suite to the east and the felsic to mafic volcanic rocks of the Yathkyed greenstone belt to the west.

Prior to the 2011 field season, Uranium North purchased exploration data collected for the property during the late 1990s and early 2000s by previous operators. The most pertinent data included 2004 results from a prospecting program that focused on a 3 km by 1.5 km area four kilometres east of the Komatik shear zone. High-grade grab samples returned results of up to 50.3 g/t Au and 44.8 g/t Ag from a zone called the 3900 Area. No work by Uranium North has been reported from this area.

Uranium North completed follow-up prospecting and an induced polarization (IP) survey over portions of the Komatik shear zone and the adjacent volcanic rocks of the Yathkyed belt in 2011. This work identified new mineralized zones between the Garath and Century-Bully showings; these zones are believed to be related to a nearby granodiorite intrusion. Grab samples collected returned up to 72.1 g/t Au and 89.0 g/t Ag; 27.3 g/t Au, 1040 g/t Ag, and 1.06% Cu; and 22.3 g/t Au, 27.5 g/t Ag, and 5.8% Cu. Much of this mineralization is directly associated with IP anomalies. A 550 metre-long IP anomaly was also identified 750 m south, along the Komatik shear zone within an overburden-covered valley. Data from a ground magnetic survey over this anomaly suggests the presence of a granodiorite intrusion, similar to that found near Garath and Century-Bully. No work was done on the property in 2012.

525	PISTOL BAY
Operator/Owner	Northquest Ltd.
Commodity	Gold
NTS	55K/06, 55K/07, 55K/10
Land Tenure	Crown, Surface IOL
Location	35 km northwest of Whale Cove

The Pistol Bay project comprises two prospecting permits and 44 mineral claims. The project area is underlain by the rocks of the Rankin-Ennadai greenstone belt, and covers a 50 km strike-length of the Pistol Bay corridor, a two kilometre-wide, northwest-trending deformation zone. This corridor hosts multiple gold occurrences associated with porphyritic intrusions, mineralized banded iron formations (BIF), and silicified fault zones.

Northquest began exploring the property in 2011, and completed airborne and ground magnetometer surveys, and geological mapping and sampling. A 2,500 m diamond drill program targeting the Pistol Porphyry, Cooey and Sako occurrences returned best results of 2.44 g/t Au over 7.0 m, 5.11 g/t Au over 1.0 m, and 2.0 g/t Au over 6.2 m, respectively. Continuity of mineralization at Cooey could not be established, and no further work was planned at this

occurrence. The surface exploration program identified a new discovery, Bazooka, which consists of an outcrop of pyritic, sulphidized iron formation crosscut by quartz-pyrite-carbonate veins. Grab samples from Bazooka returned grades of up to 14.50 g/t Au.

The 2012 program was designed to evaluate the Sako occurrence, Bazooka discovery, and Vickers target. Most of the 2012 work was focused at the Vickers target, an elliptical gabbro-diorite intrusive complex one kilometre in diameter within the Pistol Bay corridor. Ten drill holes totalling 2,200 m were completed with results released from four holes, three of which were drilled along the same profile. Gold mineralization is found within the gabbro-diorite intrusion and in a siliceous, chloritic breccia zone in the footwall of the intrusion. Drill hole PB-12-09 was completed to verify a historic Inco drill hole, and returned a weighted average of 5.39 g/t Au over 164.41 m; visible gold grains were documented at seven locations in the drill core. Holes PB-12-10 and PB-12-11 undercut PB-12-09, and intersected 5.61 g/t Au over 163.2 m and 2.85 g/t Au over 200.3 m, respectively. As with PB-12-09, visible gold grains were noted in multiple locations in each hole. Drill hole PB-12-12 was completed 50 m north of PB-12-09; 192.5 m of mineralized drill core returned values of 1.19 g/t Au over the length of this core, and visible gold was identified in this hole.

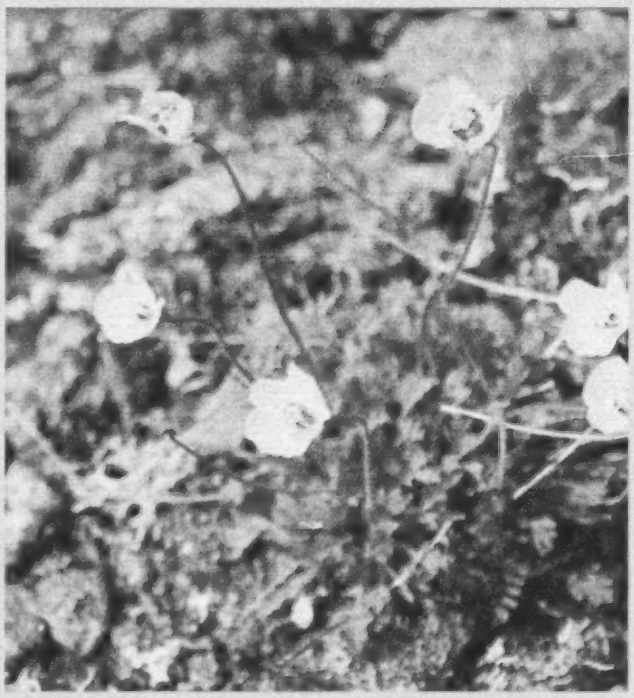
The Sako occurrence consists of quartz-sericite-pyrite schist and mylonite hosting gold-bearing disseminated sulphide mineralization. Three diamond drill holes totalling 454 m were completed to follow-up 2011 drilling. These holes returned a highest grade of 1.76 g/t Au over 15.6 m.

A ground magnetometer survey and four diamond drill holes (526 m) were completed at Bazooka. One hole was drilled directly below the mineralized outcrop discovered in 2011 and returned a result of 2.38 g/t Au over 9.7 m. The remaining holes either failed to intersect iron formation or intersected iron formation that was not mineralized.

Northquest initiated a high-resolution airborne magnetometer survey over the 50 km strike-length of the Pistol Bay corridor. This survey was designed to assist planning for follow-up ground geophysical surveys and drill targeting, as well as to identify additional discoveries with similar magnetic characteristics to the known occurrences.

526	RB
Operator/Owner	Anconia Resources Corp.
Commodity	Gold
NTS	55L/07, 55L/10
Land Tenure	Crown, Surface IOL
Location	110 km northwest of Whale Cove

The 3,895 ha RB property consists of four mineral claims acquired by Anconia Resources in 2011. Exploration in 2011 included a reconnaissance-level site visit, sampling for base and precious metals to confirm historic showings, prospecting for new occurrences, and an airborne magnetic survey. The property has abundant low-sulphide quartz veins a few centimetres to 20 m thick and mineralization is well exposed over one kilometre. The highest gold values are found in samples associated with low-angle structures. Average assay values of 28 samples yielded 22.4 g/t Au, 7.4 g/t Ag, 0.41% Cu, and 0.98% Zn, with the highest precious metal values being 49.2 to 144.0 g/t Au and 34.2 to 37.9 g/t Ag. No work was done on the property in 2012, nor have further exploration plans been announced.



Arctic poppies

KIVALLIQ REGION

GOLD, IRON and NICKEL–COPPER–PLATINUM GROUP ELEMENTS (PGE)

527	WINDY GOLD
Operator/Owner	Bitterroot Resources Ltd.
Commodity	Gold
NTS	65C/07 - 65C/10
Land Tenure	Crown
Location	340 km west of Arviat

Bitterroot Resources Ltd. staked a block of 40 mineral claims, the Windy Gold project, in 2011. This property lies along the northern and western edges of the Kiyuk gold project. The claims cover part of the Proterozoic Kiyuk Sedimentary Sub-Basin in a structurally complex area with minimal outcrop exposure. The Windy Gold property was staked based on results of earlier mapping, by the Geological Survey of Canada (GSC), that indicate the structural trends and stratigraphic units associated with gold mineralization at Kiyuk continue onto the Windy Gold property.

Magnetic, EM, and radiometric airborne geophysical surveys were completed in 2012. This work was intended to define the continuation, onto the Windy property, of the structural trends and geological units associated with mineralization at Kiyuk.

Bitterroot Resources is proposing a surface exploration program in 2013 that will include lake sediment, rock and soil geochemical sampling, and prospecting and geological mapping to define drill targets.

IRON

550	MAGUSE RIVER
Operator/Owner	Ridgemont Iron Ore Corp.
Commodity	Iron
NTS	55E/10, 55E/15
Land Tenure	Crown, Surface IOL
Location	80 km north of Arviat

The Maguse River project covers an area of folded, magnetite-rich Archean metasedimentary to metavolcanic rocks of the Rankin-Ennadai greenstone belt within the Churchill Province. IronOne Inc. completed a $4.5 million exploration program on the property in 2011 that included airborne magnetic and EM geophysical surveys, reconnaissance mapping and sampling, and a 6,000 m diamond drill program to test magnetic anomalies identified by the geophysical program. No results from this program have been released.

In 2012, Ridgemont Iron Ore Corp. acquired all shares of IronOne Inc., and acquired the privately held mineral claims that comprised part of the Maguse River iron project. As a result, Ridgemont now holds a 100 per cent interest in both the Maguse River project and another iron project outside of Nunavut. No work was reported at Maguse River in 2012.

NICKEL–COPPER–PGE

610	FERGUSON LAKE
Operator/Owner	Starfield Resources Inc.
Commodities	Nickel, Copper, Platinum, Palladium
NTS	65I/10, 65I/11, 65I/14, 65I/15
Land Tenure	Crown, Surface IOL
Location	160 km south of Baker Lake

Starfield Resources Inc. has been exploring the Ferguson Lake massive sulphide nickel-copper-platinum-palladium deposit since 1999. The deposit is located within the northwestern part of the Hearne Domain in the Churchill Province. Massive sulphide mineralization on the property is hosted by an east-west trending hornblendite horizon that makes up part of the Ferguson Lake Intrusive Complex, a multiply deformed, differentiated mafic intrusive body. The main deposit is divided into three zones, East, Centre, and West, all spatially related to the intrusive body.

In 2011, Starfield completed three diamond drill holes (1,866 m) on the property. One hole was drilled into each of three targets: a gossanous zone within an airborne conductivity anomaly; a lens of massive sulphide mineralization in the western half of the West Zone; and deep massive sulphide mineralization within the 119 Zone extension (west of the West Zone). The latter two holes intersected three and five mineralized sulphide lenses,

respectively, with reported results of 1.97% Cu, 0.66% Ni, 0.40 g/t Pt, and 1.77 g/t Pd over 7.5 m from the West Zone and 1.33% Cu, 0.73% Ni, 0.11 g/t Pt, and 1.86 g/t Pd over 6 m from the 119 Zone Extension.

No fieldwork on the property was carried out in 2012. Early in the year, the company provided an update of the Preliminary Economic Assessment (PEA) of Ferguson Lake released in 2008; this study incorporated engineering and exploration work that occurred after 2008. Starfield continues to look for strategic partners to assist with the development of the property.

611	SOUTHAMPTON
Operator/Owner	Vale Canada Limited
Commodities	Nickel, Cobalt, Copper, Platinum, Palladium
NTS	46B/10, 46B/15
Land Tenure	Crown, Surface IOL
Location	55 km north of Coral Harbour

Vale Canada Limited maintains five prospecting permits totalling 75,334 ha for the Southampton project. These permits were acquired following a GSC Geo-mapping for Energy and Minerals (GEM) project on Southampton Island that identified ultramafic targets prospective for Ni-Cu-PGE mineralization. Vale carried out preliminary work on the Paleoproterozoic intrusive rocks in 2010 and examined areas highlighted from geophysical surveys in 2011. In 2012, Vale Canada undertook further work on the property, including limited drilling. No results from the program have been released.

Sunset at Vale's Southampton project
Courtesy of AANDC

RARE EARTH ELEMENTS

640 1 641 2 642 3	NUNAVUT RARE EARTH (PP 8183 - 8185[1]; PP 8186, 8187[2]; PP 8188[3])
Operator/Owner	Cache Exploration Inc.
Commodity	Rare Earth Elements
NTS	56D/01, 56D/02[1]; 56E/05, 56E06[2]; 65A/10[3]
Land Tenure	Crown, Surface IOL[1]; Crown[2,3]
Location	70 km east of Baker Lake[1], 110 km north of Baker Lake[2], 160 km southwest of Arviat[3]

Cache Exploration Inc.'s Nunavut Rare Earth project consists of six prospecting permits in three blocks in the southern and central Kivalliq. The company is targeting REE anomalies associated with known occurrences of uranium mineralization.

The 2011 field program on the project included prospecting and sampling on all the permits, and verification of historical occurrences reported by the GSC. Eighty samples were collected in total and results from samples on two prospecting permits (PP8186 and PP8187) returned significant total REE and uranium results, the highlights being values of 556 parts per million (ppm) total REE and 1.95% U_3O_8.

Cache released a project update early in 2012 and indicated that further exploration would require detailed geologic mapping of the areas having high uranium or REE concentrations. No fieldwork was reported for the 2012 season.

Cameco's new camp at Aberdeen Lake

URANIUM

670[1] 671[2]	ABERDEEN[1], TURQAVIK[2]
Operator/Owner	Cameco Corporation
Commodity	Uranium
NTS	66B/01 - 66B/03, 66B/06 – 66B/10[1]; 66A/05, 66A12, 66B/08, 66B/09, 66B/13 – 66B/16, 66G/03[2]
Land Tenure	Crown, Surface IOL
Location	115 km west of Baker Lake[1]; 105 km northwest of Baker Lake[2]

Cameco Corp. has 100 per-cent ownership of the Turqavik (122,713 ha) and Aberdeen (112,623 ha) adjoining properties which cross the Thelon River area west of Baker Lake along the eastern margin of the Paleoproterozoic Thelon Basin. Cameco planned $9 million of investments for regional exploration in 2012, including the construction of a new camp and fuel storage facility on the south side of Aberdeen Lake to support its advancing exploration programs in the area. Field activities included ground geophysics, limited geological mapping and sampling, and diamond drilling. On both projects, Cameco has used a combination of reconnaissance and delineation drilling to define zones of mineralization. Delineation drilling to expand the Tatiggaq and Qavvik prospects was a high priority for the company this year. Tatiggaq is the highest-grade uranium zone documented in the northeast part of the Thelon Basin; the deposit is open in both directions along strike and at depth. Reconnaissance drilling of new targets took place along the Judge Sissons fault and within the Thelon Formation. Follow-up drilling was undertaken west of Qavvik on the Ayra discovery, where high uranium values were found in proximity to the northeasterly-trending Judge Sissons fault zone, and anomalous values of boron, phosphorous and molybdenum were reported in 2011.

Uranium mineralization at Tatiggaq consists of vein- and fracture-hosted ore zones, with the mineralization occurring along distinct oxidation-reduction boundaries as finely to massively disseminated grains and zones of massive pitchblende. New results indicate significant grades of up to 3.5% U_3O_8 over 10 m along the Andrew Lake fault. Drilling results testing for additional mineralization at Qavvik returned grades of 0.5% U_3O_8 over a length of up to 20 m. Overall, the Qavvik prospect is strongly altered with extensive low-grade mineralization; some drill intercepts show higher grade intervals measuring a few metres. The mineralization follows the trace of a northeast-trending fault that crosscuts the Woodburn Lake Group stratigraphy. The mineralization extends from surface to a depth of 390 m.

Additional results from the 2012 drilling and ground geophysics have not been released.

672	AMER LAKE
Operator/Owner	Uranium North Resources Ltd.
Commodities	Uranium, Graphite
NTS	66H/06, 66H/07, 66H/09, 66H/10, 66H/11
Land Tenure	Crown
Location	135 km north of Baker Lake

Uranium North Resources acquired the Amer Lake property in 2006 and has conducted a variety of exploration programs since that time. The property is divided into the Amer Lake Main Zone, where most work has been focused, Amer Lake East Zone, and Amer Lake West Zone. The Main Zone deposit is a sandstone-hosted uranium deposit with localized higher-grade, structurally controlled uranium mineralization.

Uranium North announced an inferred resource of 19.3 million pounds (lbs) U_3O_8 for the deposit in 2009. The company completed 16 reverse circulation drill holes totaling

2,285 m in 2011 on the Amer Lake property. Results from this drilling include down-hole intersections of up to 0.216% U_3O_8 over 1.5 m and 0.047% U_3O_8 over 4.6 m. Based on these results, Uranium North increased the 2009 inferred uranium resource to 22.9 million tonnes of ore averaging 0.041% U_3O_8, for a total of 20.9 million lbs U_3O_8.

During the 2011 program, multiple, flat-lying, graphite-bearing beds up to 25 m thick were identified. Samples taken from these beds have returned graphitic carbon values of up to 4.13%. Based upon the discovery, Uranium North staked an additional 11 claims over areas with graphitic outcrop.

No work was reported on the property in 2012.

673	ANGILAK
Operator, Partner	Kivalliq Energy Corporation, Nunavut Tunngavik Incorporated
Commodity	Uranium
NTS	65J/06, 65J/07, 65J/09 – 65J/11, 65J/15
Land Tenure	Crown, Subsurface IOL
Location	235 km southwest of Baker Lake

The Angilak project comprises 101 Crown mineral claims surrounding one IOL subsurface parcel for a total area of 102,320 ha. The main exploration focus of the project is the Lac Cinquante deposit, a basement-hosted, unconformity and hydrothermal vein-type uranium deposit. The Angilak property is in the Angikuni Sub-Basin of the Baker Lake Basin. Uranium mineralization occurs predominantly as fracture-controlled pitchblende and sulphide mineralization in graphitic-chloritic tuffaceous metasedimentary host rocks of the Baker Lake Group.

In March 2012, Kivalliq Energy released a National Instrument (NI) 43-101-compliant resource update for the Angilak property. Using a cut-off grade of 0.2% U_3O_8, an inferred resource is now estimated at 1,779,000 tonnes grading 0.692% U_3O_8 for a total of 27.13 million lbs of uranium. This updated resource was augmented by the Eastern and Western Extension zones of the Lac Cinquante Main Zone, and is twice the original estimated resource. As part of the NI 43-101 reporting it was determined that the Lac Cinquante deposit also has the potential to be a polymetallic

Geologist examining uraniferous veins with a scintillometer, Angilak
Courtesy of AANDC

producer, and is estimated to contain 931,000 ounces of silver, 6.17 million lbs of molybdenum, and 9.92 million lbs of copper.

A total exploration budget of $20 million was allocated to the project for 2012. Goals of the drilling program were to expand the resource estimate at Lac Cinquante, to test new zones discovered in proximity to the deposit, and to investigate other previously untested geophysical targets on the property. The company exceeded its original drilling expectations and completed 33,583 m of diamond drilling in 173 holes and 5,273 m of RC drilling in 38 holes. Exploration activities also comprised various geophysical surveys and a seismic survey totaling 930 line-km. Geological work on the property involved prospecting, sampling and mapping.

Five new mineralized zones, J4, Ray, Flare, Hot Zone and Southwest, were discovered on the property in 2012, for a total of ten new discoveries added to the original Lac Cinquante deposit. The J4 zone lies about 2.3 km east of the Main Zone; drilling has outlined uranium mineralization for 800 m along-strike. Mineralization occurs along an upper and lower horizon in quartz-carbonate veins hosted in tuffaceous metasediments within a thicker sequence of basalt. The

deepest mineralization on the property, 383 m depth below surface, was also intersected at J4. Assay results from one hole returned values of 1.91% U_3O_8, 79.8 g/t Ag, 0.55% Mo, and 0.30% Cu over 1.3 m. J4 remains open in both directions along strike and at depth.

The Ray Zone is located southeast of the Eastern Extension and about 300 m south of J4. Five radioactive intervals have been identified and uranium mineralization intersected in drill holes along a strike length of 310 m within a two kilometre-long conductor. Flare Zone is situated at a second radioactive zone, characterized by a 1.5 km-long conductor running parallel to the Western Extension, but offset by a distance of 1.7 km to the south. Limited drilling results have been released, but the company has indicated that weak radioactivity has been intersected in several drill holes to a depth below 100 m.

Quartz-carbonate veins in sheared basalt and quartz-feldspar porphyry host uranium mineralization within the two-kilometre conductor termed the Hot Zone. In six of seven holes, uranium mineralization was intersected between 30 and 170 m vertical depth. Assay results from the most significant intersection yielded 0.85% U_3O_8, 56.2 g/t Ag, 0.53% Mo, and 0.07% Cu over 3.0 m at a down-hole depth of about 85 m. The conductor is parallel in orientation to the Lac Cinquante trend, but located 1.8 km to the northeast. The mineralization remains open at depth and along strike.

The company conducted airborne and ground geophysical surveys, prospecting, mapping, and soil geochemical surveys on four geophysical targets: Pulse, Blaze, Spark, and Joule. Geophysical conductive trends parallel to or offset from the Lac Cinquante Main Zone continued to return encouraging results, including 0.44% U_3O_8, 12.8 g/t Ag, and 0.59% Cu over 2.3 m from Pulse; 0.90% U_3O_8, 17.0 g/t Ag, and 0.25% Cu over 2.1 m from Blaze; and 0.49% U_3O_8, 12.3 g/t Ag, and 0.03% Cu over 1.5 m from Spark.

Other polymetallic-mineralized showings were also investigated; including the Taluaq Zone, a new area recently staked that appears to be associated with a magnetic signature outlining a subvolcanic syenite intrusion. Native silver is visible in grab samples with Cu-Pb-Zn-Ag mineralization from this zone.

Engineering work studying infrastructure requirements and metallurgical research is ongoing. Kivalliq Energy intends to provide an updated NI 43-101 inferred mineral resource estimate for Lac Cinquante in early 2013.

674	KIGGAVIK
Operator, Partners	AREVA Resources Canada Inc., Daewoo International Corporation, JCU Exploration (Canada) Co. Ltd.
Commodity	Uranium
NTS	66A/05, 66A/06, 66A/11, 66A/12
Land Tenure	Crown, Surface ICL, Subsurface IOL
Location	80 km west of Baker Lake

The Kiggavik project west of Baker Lake consists of 21 mineral claims and 37 mining leases covering 33,076 ha. It is a joint venture project with AREVA Resources Canada Inc. as the operator, and JCU Exploration (Canada) Co. Ltd. and Daewoo International Corporation as partners. The Kiggavik project is the most advanced uranium project in Nunavut. The property hosts five uranium deposits, Main, Centre, East, Andrew Lake and End; and two prospects, Bong and Sleek.

The Kiggavik deposits contain a proven reserve of 44,000 tonnes of uranium, and a probable total resource of 60,000 tonnes; this converts to 148 million lbs of U_3O_8 at an average grade of 0.55%. The project is located two kilometres south of the Thelon fault zone, which is the faulted contact between

Kiggavik camp
courtesy of AREVA

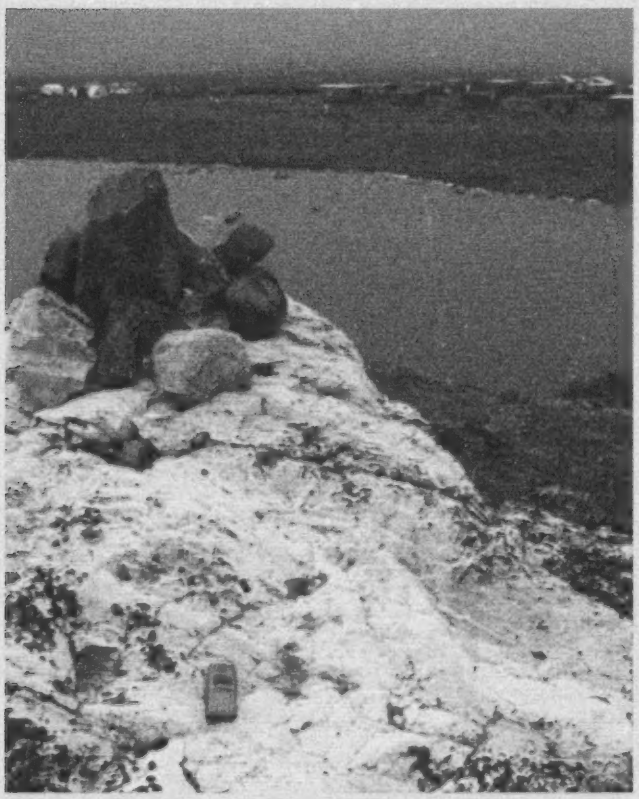
basement metasedimentary units and the Thelon sandstone. The altered metasedimentary rocks are the main host rocks for the uranium mineralization, with lesser amounts of mineralization occurring in altered granitoid and intrusive rocks. Mineralization occurs predominantly as pitchblende and coffinite in silica-depleted, extensive alteration zones comprised of illite and sericite. Two faults, the Thelon fault to the north and the Sissons fault to the south of the deposit area, are interpreted to have created a conduit-corridor system for the mineralizing fluids. All of the project's major uranium deposits, including Kiggavik and Sissons (Andrew Lake and End), lie along these fault structures.

Field activities in 2012 included detailed exploration work and drilling of known prospects. Approximately 12,000 m of drilling was undertaken to extend the known mineralization at the Bong prospect, End Grid, Granite, and at Sleek Lake.

The Kiggavik project is proceeding through the environmental assessment process. In late December 2011, AREVA submitted a Draft Environmental Impact Statement (DEIS) to NIRB, followed by a revised DEIS in April 2012. Information requests from a number of stakeholders were returned to the proponent and regulators in July. AREVA has committed to responding to the information requests by the end of January 2013. Pending receipt of AREVA's response, the next phase in the environmental assessment process is a technical review of the DEIS. If the project is ultimately approved for development, construction could begin in 2017, and production could start in 2020. Based on the current project proposal, development and production would involve up to four open pits, an underground operation, and a 7.8 million lbs per year ore-processing facility, in support of a 17-year mine-life.

In support of the Kiggavik project, AREVA has been making regular community presentations to all Kivalliq communities, providing updates on the project.

Brecciated quartzite outcrop near Kiggavik camp
Courtesy of AANDC



675[1] 676[2] 677[3] 678[4]	**NORTH THELON** (AGNICO-EAGLE OPTION[1], INUIT OWNED LANDS[2] KIGGAVIK NORTH[3], KIGGAVIK SOUTH[4])
Operator, Partner	Forum Uranium Corp.[1-4], Agnico-Eagle Mines Limited[1]
Commodity	Uranium
NTS	66A/05, 66A/06, 66A/011[1]; 66A/06, 66A/07, 66B/02, 66B/07, 66B/08[2]; 66A/05 – 66A/07, 66A/09 – 66A/12[3]; 66A/04 – 66A/06, 66B/01, 66B/08[4]
Land Tenure	Crown, Surface IOL[1,3-4]; Subsurface IOL[2]
Location	70 km west of Baker Lake[1]; 55 km west of Baker Lake[2]; 65 km northwest of Baker Lake[3]; 90 km west of Baker Lake[4]

The North Thelon project is a large property that consists of Crown land and IOL totaling 219,202 ha in the Thelon Basin. Work on the property in 2011 included 2,036 m of drilling on targets selected from regional geological mapping, geophysical surveys, and geochemical sampling programs conducted over the prior five years. Three targets, Tarzan, BL-32 and Judge, were drill tested and six other potential targets remain untested. Encouraging results were intersected at BL-32, a target on an IOL parcel under an Exploration Agreement with Nunavut Tunngavik Incorporated (NTI), which lies along the Andrew Lake fault. The majority of the drill holes intersected intense alteration associated with mineralization; assay results returned values of 13 ppm U over 49 m, 406

Early morning light over the land near Baker Lake

ppm V over 30 m, and 1,186 ppm B over 250 m, including an anomalously high value of 2.69% B over 10 m.

Drilling at the 100 per cent Forum-owned Tarzan prospect, yielded similar results of 20 ppm U over 79.5 m, 326 ppm B over 156 m, and 53 ppm Pb over 131 m.

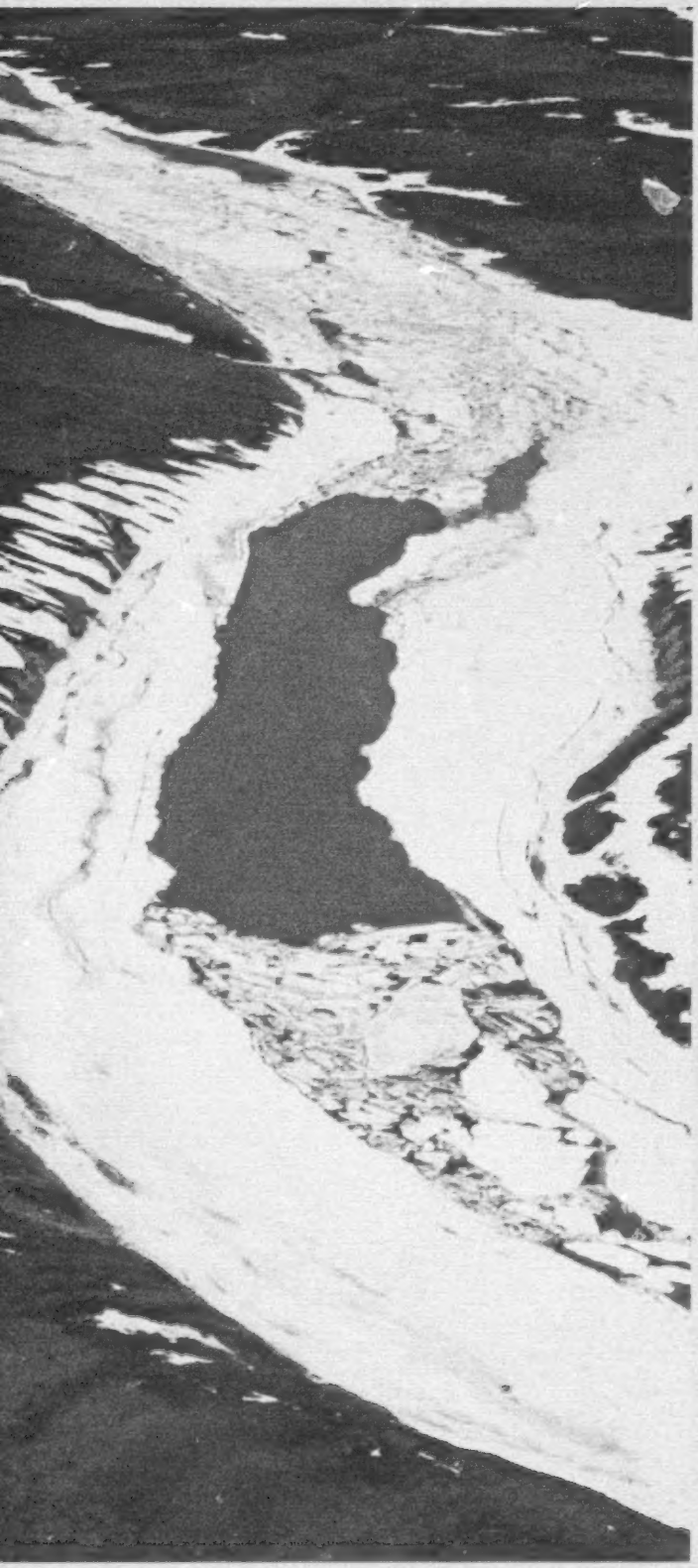
Supplies and fuel have been mobilized from Baker Lake to a new campsite location at Judge Sissons Lake, in preparation for future work.

679	THELON BASIN
Operator/Owner	Mega Uranium Ltd.
Commodity	Uranium
NTS	66B/14 - 66B/16, 66G/01, 66G/02, 66G/08, 66H/05
Land Tenure	Crown, Subsurface IOL
Location	150 km northwest of Baker Lake

The Thelon Basin uranium project is located in the northeastern portion of the Thelon Basin, and comprises 70 mineral claims and five mineral leases with a total area of 65,700 ha. Until early 2012, the project was under a joint venture agreement between Mega Uranium Ltd., holding a 51 per cent interest, and Titan Uranium Inc., holding the remaining 49 per cent interest. Titan had been the project operator. In February 2012, Mega Uranium consolidated control of the project when the company acquired all of Titan's Canadian exploration properties.

Titan had explored the property for a number of years and completed mapping, prospecting, geophysical surveys, and bulk till sampling. Titan also conducted three drill programs, for a total of 43 diamond drill holes and 3,341 m of core, between 2005 and 2008, with Mega Uranium as the funding partner for the latter two years. Data compilation and interpretation was carried out in 2009, the same year that the project was put on care and maintenance status. Plans for a 2011 work program had been announced, but it was not reported whether the program was carried out.

In late 2012, NexGen Energy Ltd. signed an agreement with Mega Uranium to acquire this Thelon Basin project and other assets of Mega Uranium.



INACTIVE PROJECTS

A number of gold projects in the Kivalliq region did not report any activity in 2012. These included the **Muskox** project on 8,728 ha controlled by AEM; Diamonds North Resources' **Esker** gold claim project; Uranium North Resources' **Angikuni Lake** gold project, comprising 20,986 ha; and the **Peter Lake** project, located on an IOL parcel being investigated by Canada Nickel Corp.

The **Nueltin Lake** project comprises mineral claims surrounding a central mineral lease occupying 25,478 ha, owned by Cameco Corporation. Gold and uranium occurrences have been identified at the contact between metasedimentary units of the Wollaston and Hurwitz Groups. No work has been reported since 2009.

The exploration focus at **Nutaaq** was switched from uranium to REE after Forum Uranium Corp. re-evaluated geochemical analysis data from its uranium prospect in the Thelon Basin. The local geology of Nutaaq comprises a syenite body about nine kilometres across intruded by Hudsonian granites and pegmatites, later cut by the Sissons fault. The company carried out a third year of investigations on the property in 2011 and reported 7.4% total rare earth oxides from one sample. The REE are concentrated in goyazite within the syenite and it is unclear whether the mineralization is related to deep paleoweathering, alteration, or a retrograde metamorphic event. Additional ground sampling and a drill program is under consideration, however no work was carried out in 2012.

Shear Diamonds Ltd. and joint venture partner Stornoway Diamond Corporation did not conduct any work in 2011 at the **Churchill** and **Churchill West** diamond projects located near Chesterfield Inlet. Stornoway Diamond Corp. retains100 percent ownership of the 114,961 ha **Qilalugaq** property located north of Repulse Bay. In June 2012, Stornoway released a NI 43-101 technical report which characterized its Q1 to Q4 kimberlite complex as a steep-side lobate body comprising five intrusive phases to a depth of 305 m. Previous drill core available from Q1 to Q4 provided 998.9 kg of material that was submitted for caustic fusion analysis, yielding 808 microdiamonds. This information was used to prepare an inferred mineral resource estimate, to a depth of 205 m, of 48.8 million tonnes with 26.1 million carats of diamonds, for an average diamond content of 5.36 carats per tonne. There has been no additional work reported in 2011 or 2012.

Thelon River
Courtesy of NAVDAC

KIVALLIQ REGION

INACTIVE PROJECTS

Number	Project	Operator
DIAMONDS		
487, 488	Churchill, Churchill West	Shear Diamonds Ltd.
489	Qilalugaq	Stornoway Diamond Corporation
GOLD		
544 – 546	Angikuni Lake (AN, F13, Robin)	Uranium North Resources Corp.
547	Esker	Diamonds North Resources Ltd.
548	Muskox	Agnico-Eagle Mines Limited
549	Peter Lake	Canada Nickel Corp.
RARE EARTH ELEMENTS		
669	Nutaaq	Forum Uranium Corp.
URANIUM		
699	Nueltin Lake	Cameco Corporation

Please refer to the map on page 33 for the location of inactive projects in the Kivalliq region.

Muskox grazing near Kiggavik camp
Courtesy of AANDC

QIKIQTANI REGION

OVERVIEW

Nunavut's largest administrative region is the Qikiqtani region, which covers an area of 1,040,418 square kilometres. The region is made up primarily of the islands of the Canadian Arctic archipelago, including Baffin, Devon, Cornwallis, Bathurst, Ellesmere, and many smaller islands. The northern part of the Melville Peninsula is also included within the Qikiqtani region, as are the Belcher Islands in southeastern Hudson Bay. The city of Iqaluit, located on Baffin Island, is Nunavut's capital and is a major centre for exploration-related supplies and support services for the region. Other communities that currently provide services and labour to exploration projects include Hall Beach, Pangnirtung, Pond Inlet, Arctic Bay, Resolute, and Sanikiluaq. The hamlets of Igloolik, Clyde River, Cape Dorset, Grise Fiord, Kimmirut, and Qikiqtarjuaq are also located in this region.

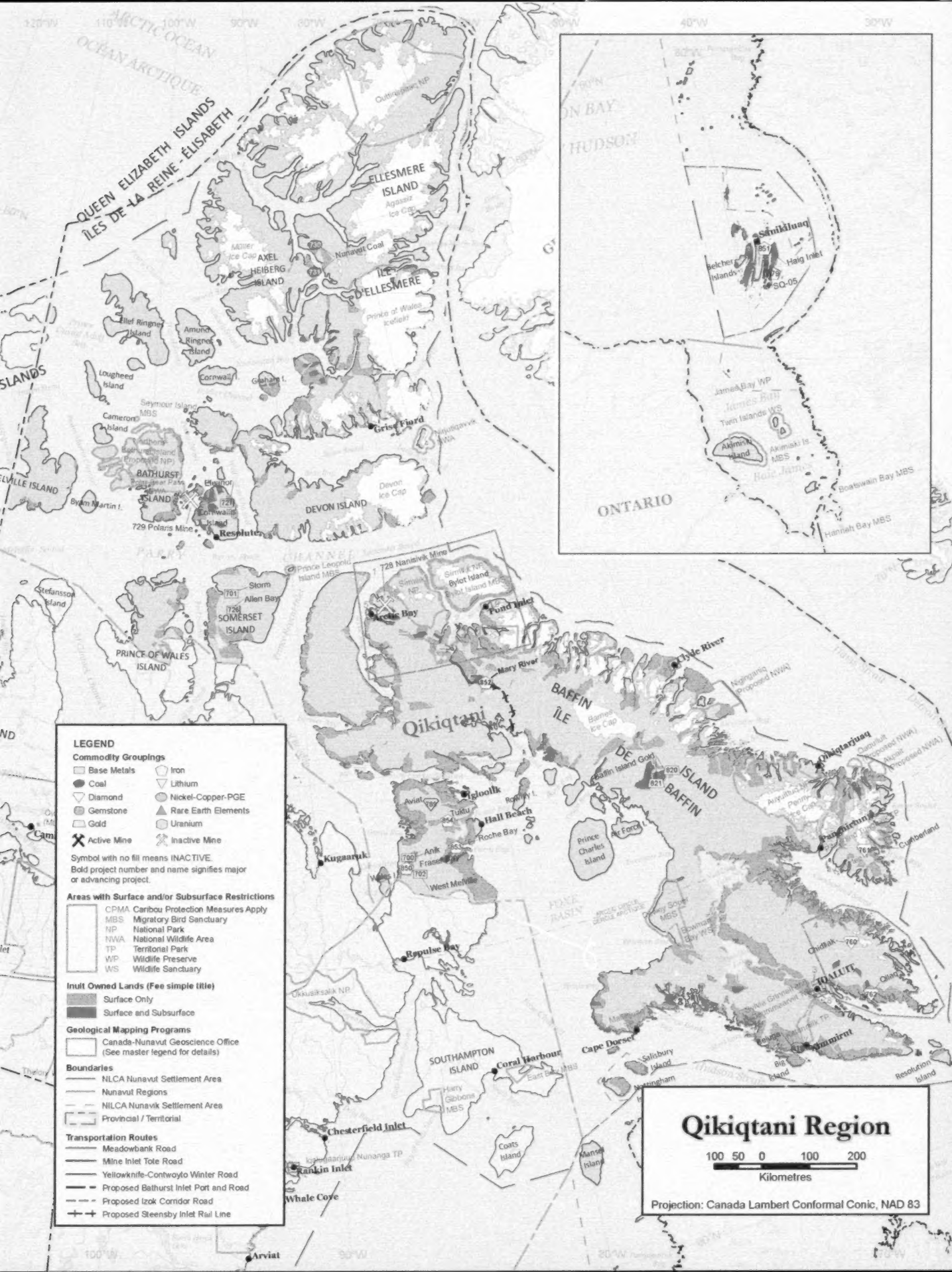
The Qikiqtani region is underlain by rocks of the Archean and Proterozoic-aged Churchill, Arctic Platform, Franklinian and younger geologic provinces. Due to the variability of the rocks, the region hosts diverse mineral deposits and occurrences including iron, base metals, gold, platinum-group elements (PGE), diamonds and sapphires.

In December 2012, the Minister of Aboriginal Affairs and Northern Development and other federal departments with jurisdictional responsibility for this project approved Baffinland Iron Mines Corporation's Mary River project after reviewing the recommendation from the Nunavut Impact Review Board (NIRB). The Board released their Final Hearing Report in September, assessing the ecosystemic and socio-economic impacts associated with the proposed Mary River iron project. The report determined the project could proceed subject to 184 terms and conditions.

On southern Baffin Island, Peregrine Diamonds Ltd. continued exploration work on its Chidliak diamond project this season. This work resulted in the discovery of two new kimberlites, bringing the total in this diamond district to 64: 61 on the Chidliak property and three on Peregrine's Qilaq property. The company announced in December 2011 that then-partner BHP Billiton was selling its interest in the Chidliak project back to Peregrine. After the 2012 field season, Peregrine announced a new option agreement with De Beers Canada Inc. In the High Arctic, Canada Coal Inc. undertook an exploration program on Ellesmere Island to evaluate the economic potential of the coal deposits within their licence tenure.

Seventy-two of the 109 prospecting permits issued by Aboriginal Affairs and Northern Development Canada, in 2012, are located in the Qikiqtani region. Many of these permits were acquired on ground in the High Arctic.

Helicopter on Hall Peninsula
Courtesy of AANDC


QUEEN ELIZABETH ISLANDS
ÎLES DE LA REINE-ÉLISABETH
ELLESMERE ISLAND
ÎLE D'ELLESMERE
AXEL HEIBERG ISLAND
Nanavut Coal
Agassiz Ice Cap
Outtenahuit NP
Prince of Wales Icefield
Ellef Ringnes Island
Amund Ringnes Island
Cornwall I.
Graham I.
Lougheed Island
Cameron Island
Seymour Island MBS
Griese Fiord
Nunuqaqvik NWA
BATHURST ISLAND
Byam Martin I.
Eleanor
Cornwallis Island
729 Polaris Mine
Resolute
DEVON ISLAND
Devon Ice Cap
728 Nanisivik Mine
Nanisivik
Arctic Bay
Pond Inlet
Prince Leopold Island MBS
Stefansson Island
Storm
Allen Bay
SOMERSET ISLAND
PRINCE OF WALES ISLAND
Clyde River
Mary River
Qikiqtani
BAFFIN ÎLE DE BAFFIN ISLAND
Barnes Ice Cap
Baffin Island Gold
Qikiqtarjuaq
Igloolik
Aviat
Tuktu
Hall Beach
Roche Bay
Prince Charles Island
Air Force I.
Kugaaruk
Anik
Fraser
West Melville
Repulse Bay
Ukkusiksalik NP
IQALUIT
Cape Dorset
Kimmirut
Salisbury Island
Nottingham
Resolution Island
SOUTHAMPTON ISLAND
Coral Harbour
Harry Gibbons MBS
Coats Island
Mansel Island
Chesterfield Inlet
Kigiqtaarjuup Nunanga TP
Rankin Inlet
Whale Cove
Arviat
Sanikiluaq
Belcher Islands
Haig Inlet
SQ-05
James Bay WP
Twin Islands WS
Akimiski Island
Akimiski Is. MBS
Boatswain Bay MBS
Hannah Bay MBS
ONTARIO
LEGEND
Commodity Groupings
Base Metals
Coal
Diamond
Gemstone
Gold
Active Mine
Iron
Lithium
Nickel-Copper-PGE
Rare Earth Elements
Uranium
Inactive Mine
Symbol with no fill means INACTIVE.
Bold project number and name signifies major or advancing project.
Areas with Surface and/or Subsurface Restrictions
CPMA Caribou Protection Measures Apply
MBS Migratory Bird Sanctuary
NP National Park
NWA National Wildlife Area
TP Territorial Park
WP Wildlife Preserve
WS Wildlife Sanctuary
Inuit Owned Lands (Fee simple title)
Surface Only
Surface and Subsurface
Geological Mapping Programs
Canada-Nunavut Geoscience Office
(See master legend for details)
Boundaries
NLCA Nunavut Settlement Area
Nunavut Regions
NILCA Nunavik Settlement Area
Provincial / Territorial
Transportation Routes
Meadowbank Road
Mine Inlet Tote Road
Yellowknife-Contwoyto Winter Road
Proposed Bathurst Inlet Port and Road
Proposed Izok Corridor Road
Proposed Steensby Inlet Rail Line
Qikiqtani Region
100 50 0 100 200
Kilometres
Projection: Canada Lambert Conformal Conic, NAD 83

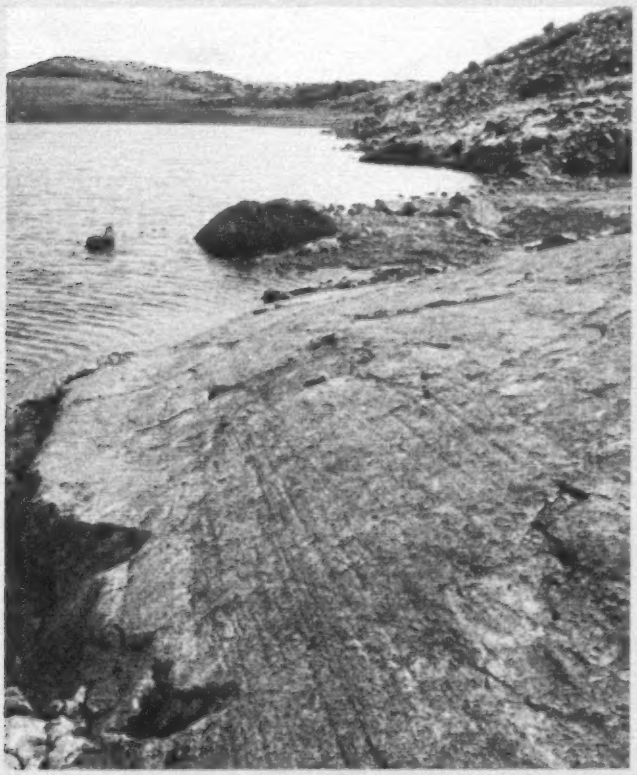
BASE METALS

700	ANIK
Operator/Owner	Advanced Explorations Inc.
Commodities	Copper, Nickel
NTS	47B/02, 47B/07 – 47B/10, 47B/16
Land Tenure	Crown, Surface IOL
Location	170 km west of Hall Beach

The Anik project, formerly known as the West Melville Area or Western Permits project, is a nickel-copper exploration project located on the western side of the Melville Peninsula. The project consists of two prospecting permits and 119 mineral claims.

Advanced Explorations Inc. (AEI) acquired the claims that make up Anik in 2010, after work by the Geological Survey of Canada (GSC) reported anomalous base metal values from samples taken from that area in 2009 and 2010. One grab sample containing massive sulphide mineralization returned high values of nickel, copper, and cobalt. AEI believes this mineralization is associated with ultramafic units in the nearby Prince Albert greenstone belt.

Glacial striations on a banded iron formation outcrop, Melville Peninsula
Courtesy of NWMC



Highlights from the 2011 season on the Anik property included samples from a mafic-ultramafic unit assaying 0.86% Ni, 0.87% Cu, and 0.05% Co, and several grab samples from a hydrothermally-altered basalt that assayed 1.93% Cu, 5.33 grams per tonne (g/t) Ag, and 0.53 g/t Au. Molybdenum mineralization was also discovered on the property, with best results of 3.19% Mo.

The company had proposed a two-phase exploration program for the 2012 season. The first phase was to include a 12,000 line-kilometre (km) airborne geophysical survey, geological mapping, prospecting, and sampling. The second phase was to include an airborne hyperspectral survey and diamond drilling. This program was not carried out in 2012; the company has deferred the work to a future field season.

701	STORM
Operator, Partner	Aston Bay Ventures, Commander Resources Ltd.
Commodities	Copper, Zinc, Silver
NTS	58C/10, 58C/11
Land Tenure	Crown, Surface IOL
Location	120 km south of Resolute

The Storm copper-zinc-silver property, located on the northwest coast of Somerset Island, was optioned from Commander Resources Ltd. by Aston Bay Ventures in November 2011. The property, which consists of approximately 84,300 hectares (ha), contains four copper showings discovered by Teck Cominco in the 1990s. These showings are hosted in altered and brecciated carbonate rocks. Historical drill hole results reported by the previous operator include 5.05% Cu over 53 metres (m), and 0.96% Cu over 96 m. Commander Resources was the operator of the property for the 2011 season, and conducted an airborne geophysical survey over 350 square kilometres to better define the zone of copper mineralization.

Work on the property by Aston Bay Ventures in 2012 consisted of regional exploration, including identification of new drill targets, and GPS mapping to verify the locations of historical drill collars and occurrences, with the goal of reinterpreting the existing data. Additional sampling was planned for lower-grade mineralized zones. No results have been released from the 2012 work program. Plans for the 2013 season include a regional sampling program, diamond drilling, and possible ground geophysics.

702	WEST MELVILLE
Operator/Owner	Vale Canada Limited
Commodities	Copper, Nickel
NTS	46M/09, 46M/16, 46N/13, 46N/14, 47B/01, 47B/02, 47B/07, 47B/08
Land Tenure	Crown, Surface IOL
Location	170 km southwest of Hall Beach

Vale Canada Limited acquired mineral tenure on Crown land and Inuit Owned Land (IOL) (surface rights) to conduct exploration work for Ni-Cu-PGE at Adamson River, north of Repulse Bay on the Melville Peninsula. The project currently consists of 24 mineral claims and 17 prospecting permits.

These claims and permits were acquired based on a nickel discovery reported by the Geological Survey of Canada (GSC) as part of a Geo-mapping for Energy and Minerals project on the Melville Peninsula. The prospective ultramafic rocks hosting nickel mineralization are confined to the Archean Prince Albert greenstone belt; these ultramafic rocks occur as narrow, northeast-trending units within the Prince Albert Terrain. Assays of grab samples yielded results from 0.7 to 0.9% Ni in disseminated sulphides, and up to 8.0% Ni in samples with massive sulphide mineralization.

A 30-person camp was established at Mackar Inlet on the western side of Melville Peninsula this year. The company has a five-year exploration program planned to include prospecting and sampling, ground and airborne geophysics, and exploratory drilling. In the 2012 season, reconnaissance mapping and sampling, prospecting, and geophysical surveys were performed.

No results from the work carried out in 2012 have been released.

COAL

730[1] 731[2]	NUNAVUT COAL (FOSHEIM PENINSULA[1], VESLE FIORD[2])
Operator/Owner	Canada Coal Inc.
Commodity	Coal
NTS	49G/08 – 49G/10, 49G/15, 49G/16, 49H/05, 49H/12, 49H/13, 340B/02, 340B/03[1]; 49E/13, 49F/16, 49G/01, 49H/03, 49H/04[2]
Land Tenure	Crown, Surface IOL[1]; Crown[2]
Location	380 km north of Grise Fiord[1], 330 km north of Grise Fiord[2]

Canada Coal Inc. acquired 75 coal licences in the High Arctic in 2011, and currently has 11 licence applications to add to its tenure, for a total of 86 coal licences. The licences occupy a total area of 989,521 hectares (ha) on Ellesmere and Axel Heiberg islands. A number of companies, beginning in the early 1970s, have undertaken coal exploration in these areas. Canada Coal's main targets for evaluation are the properties at Fosheim Peninsula and Vesle Fiord.

No exploration work was done on the property in 2011, although Canada Coal held a number of community consultation meetings in the northern part of the Qikiqtani region to discuss its exploration plans. The company also filed an NI 43-101 report on the project in the fall of 2011.

Exploration work in the 2012 field season consisted of geological mapping, sampling to determine rank and continuity of coal zones, permafrost studies using ground-penetrating radar, and archaeological and paleontological studies. Following this work, Canada Coal released a revised National Instrument (NI) 43-101 technical report in November that incorporated analytical results from the sampling program. Analyses of 135 samples identified numerous occurrences of thermal coal and a range in grades from sub-bituminous A to lignite B. Calorific values averaged 8,946 btu/lb (dry basis) and 44 per cent of samples yielded more than 10,500 btu/lb (dry basis). The Fosheim Peninsula was determined to be the most prospective area for the higher quality coal, and four coal zones have been targeted for up to 9,000 m of future drilling. Canada Coal plans a more extensive field season for 2013.

DIAMONDS

760	CHIDLIAK
Operator, Partner	Peregrine Diamonds Ltd., De Beers Canada Inc.
Commodity	Diamonds
NTS	25P/13, 25O/15, 25O/16, 26A/04, 26A/05, 26B/01 – 26B/03, 26B/06 – 26B/11, 26B/14 – 26B/16
Land Tenure	Crown, Surface IOL
Location	115 km northeast of Iqaluit

Peregrine Diamonds Ltd.'s Chidliak diamond project is located northeast of Iqaluit, on the Hall Peninsula of Baffin Island. The project's land tenure covers 807,200 ha of Crown land and IOL (surface rights). Based on the project's total area and number of known kimberlites, Chidliak is the largest diamond exploration project in Nunavut.

Exploration at Chidliak began in 2005 with the discovery of high concentrations of kimberlite indicator minerals in three locations. Soil sampling for kimberlite indicator minerals was undertaken over the next two years and results from this sampling identified high numbers of G10 garnets, which are strong indicators for diamondiferous kimberlites. In 2007, Peregrine acquired its first prospecting permit for the area, and in 2008 conducted geophysical surveys on the property to identify possible kimberlite targets. The original three diamondiferous kimberlites, CH-1, CH-2, and CH-3,

Prospecting at the Chidliak project
Courtesy of Peregrine Diamonds

were discovered that season. That same year, Peregrine announced that BHP Billiton was exercising its earn-in rights, negotiated in 2005, on the Chidliak project, and would be funding further exploration work in order to earn up to a 51% interest in the property.

Thirteen new kimberlites were discovered in 2009 and an additional 34 kimberlites were discovered during the 2010 exploration program. The 2011 program included core drilling, which identified six kimberlites, and reverse circulation drilling which discovered three more, bringing the total to 59 kimberlites at Chidliak. Work also included helicopter-borne and ground geophysical surveys; sampling, mapping, and prospecting; and environmental and archaeological surveys.

BHP Billiton announced in December 2011 that the corporation was re-evaluating its options for its Canadian diamond properties, including the Chidliak project. Peregrine exercised its option to purchase BHP Billiton's 51 per cent interest in Chidliak, and the purchase was finalized in January 2012, at which time Peregrine became the sole owner and operator of the project.

Also in January of 2012, Peregrine announced results of caustic fusion microdiamond analyses for two kimberlites, CH-31 and CH-59, on samples collected in 2010 and 2011. A 4.1 tonne mini-bulk sample from CH-31 contained 610 diamonds greater than 0.106 millimetres (mm), the largest of which was a 0.055-carat off-white transparent tetrahexahedron. A total of 1.68 carats of commercial-sized diamonds were recovered from the sampled material from CH-31. The mini-bulk sample from CH-59 was smaller, at 219.6 kilograms (kg), and contained 451 diamonds, the largest of which was a 0.027-carat yellow transparent fragment.

Peregrine's 2012 field program at Chidliak began with a spring ground geophysical survey followed by summer fieldwork. The program completed 2,378 m of core drilling on kimberlites CH-1, CH-6, CH-7, and CH-44, in preparation for future bulk sampling, as well as mapping and prospecting on targets identified through the spring geophysical survey program. Geochemical analysis of four kimberlite float samples collected during the summer prospecting program, found them to be unrelated to any known kimberlite on the Chidliak property.

In August, the company announced the discovery of a new kimberlite, CH-61, which brought the total of known kimberlites on the property to 61. This kimberlite has a surface area of approximately 2.4 ha and is located approximately 20 km to the southeast of kimberlite CH-7.

Robert Joanie conducting ground magnetics, Chidliak project
Courtesy of Peregrine Diamonds

More than 720 line-km of ground magnetometer geophysical surveys were completed, interpretation of which allowed the identification of an additional 20 kimberlite targets. Reverse circulation drilling planned for the 2012 season to test these targets has been deferred to a future program. Peregrine also indicated that the bulk-sampling program originally planned for 2013 was being postponed, and that the company was in active discussions regarding options for the project.

In September 2012, a joint venture agreement was announced between Peregrine and De Beers Canada Inc. Under the terms of the joint venture agreement De Beers has the exclusive option to earn a 50.1 per cent interest in the Chidliak project, and will act as the project operator. The joint venture must be finalized by December 2013, after which De Beers has five years to invest between $37 million and $58.5 million into the Chidliak project and complete a bankable feasibility study on the project.

Further results from the 2012 season have not yet been released.

761[1] 762[2]	CUMBERLAND[1], QILAQ[2]
Operator/Owner	Peregrine Diamonds Ltd.
Commodity	Diamonds
NTS	16E/04 - 16E/06, 16E/15, 16L/01, 16L/02, 26H/08 – 26H/11, 26H/16, 26I/01, 26I/02[1]; 250/01, 250/02, 250/08, 25P/05, 26A/06, 26A/12, 26A/13[2]
Land Tenure	Crown, Surface IOL
Location	90 km east of Pangnirtung[1], 110 km east of Iqaluit[2]

Peregrine Diamonds' Cumberland and Qilaq projects are multi-commodity projects on the Cumberland Peninsula and Hall Peninsula of Baffin Island, northeast of Iqaluit. The Cumberland project currently consists of 18 prospecting permits, and the Qilaq project of two prospecting permits and 93 claims.

In 2010 and 2011, Peregrine undertook exploration programs on the Cumberland prospecting permits to evaluate the ground for its diamond and metal potential. The 2010 program identified 35 gold and PGE geochemical anomalies from 341 samples. No kimberlite indicator minerals were found in the samples. The 2011 program followed up on selected targets with detailed mapping, prospecting, and the collection of 112 additional samples. No results have been reported from this work.

The Qilaq permits and claims are located east of Iqaluit on the Hall Peninsula. E ration on the permits in 2010 discovered two kimberlites, Q1 and Q2, and a third kimberlite, Q3, was discovered by reverse circulation drilling in the 2011 field season. Several metal anomalies, including gold, silver, and PGE, were identified on the permits. Ground and airborne geophysical surveys were performed to identify further anomalies.

No fieldwork was planned for the 2012 season on the Cumberland or Qilaq properties.

GOLD

820[1] 821[2]	BAFFIN ISLAND GOLD (BRAVO LAKE[1], QIMMIQ[2])
Operator/Owner	Commander Resources Ltd.
Commodity	Gold
NTS	27B/11, 27B/12[1]; 27B/12, 37A/07, 37A/08, 37A/10[2]
Land Tenure	Crown, Surface IOL, Subsurface IOL
Location	215 km south of Clyde River[1], 250 km south of Clyde River[2]

Commander Resources Ltd.'s Bravo Lake and Qimmiq properties, south of Clyde River, comprise the Baffin Island Gold project. The two properties contain a number of prospects, and recent exploration has focused on the Kanosak and Malrok zones of the Bravo property. The Kanosak prospect consists of two silicified sedimentary units hosting arsenopyrite-associated gold mineralization. This mineralization, including several gold showings at surface, has been identified over a distance of more than three kilometres. At the Malrok prospect, the mineralization is hosted in structurally thickened silicate iron formation units.

In 2009, Commander announced a $20 million joint venture agreement for the property with AngloGold Ashanti Ltd. As part of that agreement, AngloGold financed a $4.5 million exploration program in 2010 and a $3 million program in 2011.

The 2011 program included a 3-D induced polarization survey over the property. In January 2012, Commander released interpreted results from the geophysical survey that indicated the presence of conductive units at a greater depth than had been anticipated. This new data led the company to revise the planned 2012 program to include 3,000 metres of drilling targeting the new anomalies, speculating that the anomalies may represent arsenopyrite-gold mineralization.

In March 2012, AngloGold notified Commander of its intention to withdraw from the joint venture agreement and indicated that it would not finance a 2012 exploration program. As a result, Commander retained its 100 per cent interest in the project and is continuing to search for joint venture partners. No work took place on the project in 2012.

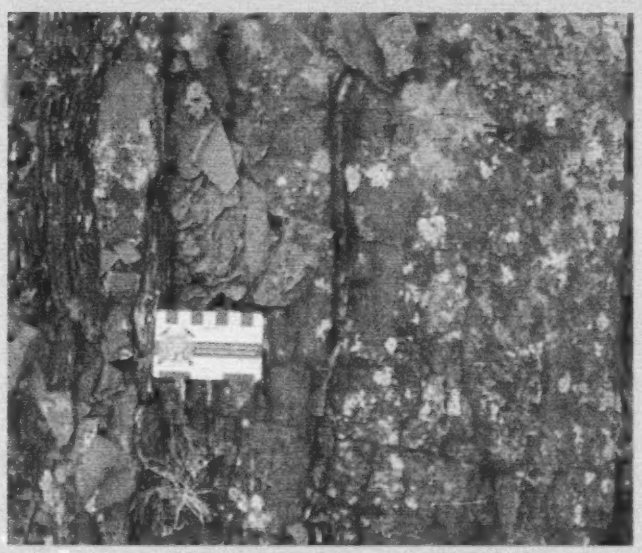
IRON

850	FRASER BAY
Operator, Partner	West Melville Metals Inc., Roche Bay plc
Commodity	Iron
NTS	47B/02
Land Tenure	Crown, Surface IOL
Location	175 km east of Kugaaruk

West Melville Metals Ltd.'s Fraser Bay project is located on the western coast of Melville Peninsula. The project, owned by Roche Bay plc, consists of a single mineral lease covering 1,306 ha of Crown land. In 2011, West Melville Metals signed a joint venture agreement with Roche Bay that allowed West Melville Metals to become the operator at Fraser Bay, and earn up to a 70 per cent interest in the project.

Exploration on the property began in the late 1960s, when reconnaissance prospecting identified several iron ore bodies on both sides of the Melville Peninsula. The banded iron formation (BIF), found within the Fraser Bay project area, occurs as discontinuous layers within metavolcanic and quartzite units of the Prince Albert Group, crosscut by two east-west-trending faults.

Jasper-rich granular chert, Haig Inlet
Courtesy of AANDC



The magnetite-rich BIF that is the focus of the project extends more than 5.5 km along strike, and ranges in apparent thickness from 100 m to more than 350 m. The 2011 exploration program included a ground geophysical survey and 57 m of channel sampling, which returned results of 68.2% Fe over 1 m and 61.6% Fe over 13 m. The presence of this high-grade iron ore has led the company to evaluate the project's direct-ship potential.

West Melville Metals' $1.5-million 2012 field program consisted of 1,012 m of channel and chip sampling from 26 locations across the exposed BIF. A 25-person camp was constructed at Mackar Inlet, near the CAM 5 Distant Early Warning (DEW) Line airstrip. In October 2012, the company announced results that included highlights of 65.3% Fe over 22.0 m and 61.2% Fe over 44.1 m from two channel samples. The mineralization in both of these samples is coarse-grained massive specular hematite, which had not been previously identified on the project.

A drill program on the project is under consideration for the 2013 season.

851	HAIG INLET
Operator/Owner	Canadian Orebodies Inc.
Commodity	Iron
NTS	34D/06, 34D/07, 34D/11, 44A/01, 44A/08
Land Tenure	Crown, Subsurface IOL
Location	20 km southeast of Sanikiluaq

Canadian Orebodies Inc.'s Haig Inlet iron ore project is located on the Belcher Islands in southeastern Hudson Bay. The project includes 17,212 ha of IOL (subsurface rights) and 22,691 ha of Crown land. Iron exploration on the Belcher Islands dates back to the 1950s, when the Belcher Mining Corporation conducted programs targeting the relatively flat-lying Kipalu Formation, a series of Palaeoproterozoic iron-bearing rocks hosted in a sedimentary-volcanic sequence. At that time, Belcher Mining estimated an unclassified resource of more than 900 million tonnes of iron ore with an average grade of 27% iron.

No further work was done on the Haig Inlet property until Canadian Orebodies began a drill program in 2011 on its

Haig North and Haig South prospects. This work consisted of drilling 64 vertical holes into the Kipalu Formation, for a total of 9,120 m of core. Results from several holes drilled in the 2011 season included assays of 36.0% Fe over 14 m, 35.9% Fe over 14 m, 35.8% Fe over 14 m, and 35.7% Fe over 14 m. The iron mineralization occurs as hematite, magnetite, and a mixture of both minerals.

The drill results allowed the company to prepare and release a NI 43-101–compliant estimate on Haig North; the deposit is estimated to have an indicated resource of 230 million tonnes grading 35.17% Fe, and an inferred resource of 155 million tonnes grading 35.55% Fe. Haig South's estimated inferred resource is 134 million tonnes of ore at 35.37% Fe.

The 2012 season consisted of more than 5,100 m of drilling on the following targets: Haig North Extension; Haig West; Haig South, to increase the resource estimate for that deposit; and a new target at Kihl Bay. Mapping on the southern margin of the Haig West target identified a previously unknown 4.5 km-long magnetite-mineralized outcrop.

In November 2012, Canadian Orebodies announced that it had exercised its option to acquire a 100 per cent interest in the Haig Inlet iron project. This decision was based on assay results from the 2012 drill program, which included highlights of 33.82% Fe over 19.9 m and 16.2 m of 35.9% Fe from two drill holes both at Haig West, and 32.03% Fe over 16.3 m at Kihl Bay.

852	MARY RIVER
Operator/Owner	Baffinland Iron Mines Corporation
Commodity	Iron
NTS	37C/09, 37C/10, 37C/15, 37C/16, 37E/13, 37F/01, 37F/08 – 37F/10, 37F/15, 37F/16, 37G/01, 37G/02, 37G/05 – 37G/07, 37G/11, 37G/12, 47H/08
Land Tenure	Crown, Surface IOL, Subsurface IOL
Location	160 km south of Pond Inlet

Baffinland Iron Mines Corporation's Mary River iron project is located south of Pond Inlet. The region has been explored sporadically for its iron potential since the first iron ore discovery in 1962. The project currently consists of five deposits of high-grade iron ore and several additional

Channel Site (NRR-003), North Cockburn River Prospect
Courtesy of Canadian...

prospects; regional exploration is continuing in order to identify further resources.

ArcelorMittal SA and Iron Ore Holdings LP, through its 100 per cent-owned subsidiary Nunavut Iron Ore Acquisition Inc., jointly acquired Baffinland in March 2011; ArcelorMittal held a 70 per cent interest in the project at the time of acquisition, with Iron Ore Holdings carrying the remaining 30 per cent. In December 2012 ArcelorMittal sold 20 per cent of its interest in Baffinland to partner Iron Ore Holdings, giving the two companies each a 50 per cent interest in the project.

Baffinland released a NI 43-101 report for the Mary River project in March 2011, prior to the takeover, in which resource estimates were provided for several of the deposits. Much of the mineralization on the property is high-grade massive specular hematite and magnetite. Deposit No. 1 contains a measured resource of 207 million tonnes grading 66.3% Fe, an indicated resource of 211 million tonnes also grading 66.3% Fe, and an inferred resource of 213 million tonnes at 66.9% Fe. Deposit No. 2 and Deposit No. 3 contain combined indicated resources of 26 million tonnes grading 65% Fe, and combined inferred resources of 336 million tonnes at 65.9% Fe. No further resource estimates for the project have been released; however, 2010 drilling at Deposit No. 4 and Deposit No. 5 returned assay results that were similar to the results from the other deposits.

Reconnaissance fieldwork was conducted at Mary River in 2011. This work included property-scale mapping, geophysical surveys, and grab and channel sampling at Glacier Lake prospect (formerly Deposit No. 6) and North Cockburn River (formerly Deposit No. 8). Property-scale mapping also took place at Turner River (formerly Deposit No. 7) and North Rowley River (formerly Deposit No. 9). The prospects were renamed as their economic viability has yet to be determined.

At the Glacier Lake prospect, a remote sensing survey of the Hook Zone was undertaken to provide an accurate topographic map for a ground magnetometer survey over 155 line-km and a gravity survey over 65 line-km. At Turne River, a 262 line-km ground magnetometer survey followed the previous airborne survey and further defined the trend of two magnetic anomalies; the continuation of this survey is planned for the 2013 field season. Geological mapping on the North Cockburn River prospect focused on a strong airborne magnetic anomaly at the easternmost extent of the fold belt and identified three iron formation units. One of the units is 85 m long, with a maximum thickness of five metres, and consists of high-grade, coarse-grained martite (a hematite pseudomorph after magnetite) and magnetite.

Exploration at the North Rowley River prospect included detailed property-scale geological mapping to investigate the known high-grade martite formations on the prospect. Results from this mapping have expanded the dimensions of this prospect to 1,200 m by 700 m with thicknesses of up to 40 m. Other geologic units associated with the banded and high-grade iron formation of this prospect include garnet gneiss and garnet-grunerite schist. Pods of high-grade iron mineralization hosted within BIF were mapped at the Triangle Lake prospect.

Geological mapping also took place at the Long Lake prospect. The geology of this prospect is complex due to significant metamorphism that occurred due to its proximity to the Tikerakdjuak fault zone. The known mineralized zone at Long Lake, made up of silicate iron formation with discontinuous lenses of high-grade magnetite, was extended as a result of the mapping program. Pervasive pyrite mineralization was also found in the area. Fifteen channel samples were collected from the prospect.

Geophysical surveys on Deposit Nos. 2, 3, and 5 were performed to complete ground magnetic and gravity survey coverage of the deposits, and to prospect for additional gravity anomalies. As a result of the 201 line-km of surveys at Deposit Nos. 2 and 3, a gravity anomaly connecting Deposit No. 3 to the East Mary River prospect was identified. At Deposit No. 5's Zone C, a 23 line-km gravity survey identified a gravity anomaly that coincides with the known magnetic anomaly from the zone. This anomaly may indicate a new mineralized zone on the west side of the deposit.

Regional exploration and prospecting traverses totaling 364 line-km also occurred across the property. Portable x-ray fluorescence units were used at previously identified showings to assist with geochemical characterization of the Mary River rocks. Rock samples were also collected; a total of 211 samples were sent for geochemical analysis and 25 samples for petrographic analysis. A limited diamond-drilling program, consisting of five holes, was drilled on Deposit No. 1. The goal of the program was to improve understanding of the geochemical characteristics of the waste rock surrounding the high-grade ore.

In 2012, the Mary River project continued with its Part 5 Environmental Review by NIRB in accordance with Article 12 of the Nunavut Land Claims Agreement. Final Hearings were held in several communities in July 2012. In September, NIRB recommended to the the Minister of

Aboriginal Affairs and Northern Development (AANDC) that the project should be allowed to proceed, subject to 184 terms and conditions. On December 3, 2012, the Minister announced the approval of the Baffinland Mary River Project, based on the recommendation of NIRB. The project now moves into the project certificate phase, led by NIRB. This project certificate is required for Baffinland to proceed with the development of the mine and related infrastructure, including the Steensby Inlet rail line and port facility. A Draft Inuit Impact Benefit Agreement (IIBA), also required under the NLCA, was announced between the Qikiqtani Inuit Association and Baffinland in September 2011. This IIBA will be finalized in conjunction with a Project Certificate being issued for the project. In October 2012, Baffinland also signed an Exploration Agreement with Nunavut Tunngavik Incorporated (NTI) to explore the Eqe Bay iron occurrences, which are located to the southeast of the main Mary River property on IOL Subsurface land.

Tuktu camp
Courtesy of AANDC

853[1] 854[2]	ROCHE BAY[1], TUKTU[2]
Operator, Partner	Advanced Explorations Inc.[1,2], Roche Bay plc[1]
Commodity	Iron
NTS	47A/03 - 47A/06, 47A/11[1]; 47A/13, 47A/14, 47D/03, 47D/04[2]
Land Tenure	Crown, Surface IOL, Subsurface IOL[1]; Crown[2]
Location	70 km southwest of Hall Beach[1], 70 km west of Hall Beach[2]

Advanced Explorations Inc.'s Roche Bay and Tuktu properties are located on the east coast of the Melville Peninsula. The project consists of four mineral leases and 45 claims at Roche Bay, and 16 mineral claims at Tuktu.

The geology of the Roche Bay project is described as an Algoma-type BIF, characterized by alternating magnetite and silicate bands. The project consists of five mineralized zones, Zones A, B, C, D, and E. The zones range in length from less than one kilometre to more than four kilometres. The Roche Bay deposit is currently part of a strategic partnership between AEI and XinXing Ductile Pipes Group Co. Ltd. (XXDP) that will give XXDP rights to up to 50 per cent of the off-take from Roche Bay in exchange for funding a Definitive Feasibility Study and providing working capital once the study is complete.

The Tuktu project is located 60 km north of the Roche Bay project. Tuktu 1, identified in 2009, is a 2,600 m-long BIF; its width has been mapped to approximately 700 m. Tuktu 2 was discovered in 2011 and is comprised of a 1,600 m-long magnetic anomaly over which grab samples returned high-grade iron content. With initial analyses returning grades in excess of 62% Fe, AEI planned work in 2012 to confirm this deposit's potential for direct-shipped ore. AEI also has an agreement with the Shandong Fulun Steel Company that entitles Shandong Fulun to purchase up to 19 per cent of the total iron ore products from AEI's projects other than Roche Bay. In August 2012, AEI announced that it was entering into another agreement with XXDP. This agreement gives XXDP the right to earn up to a 50 per cent interest in Tuktu 2 in exchange for $20 million to be spent on exploration at the site. The iron formations on both properties were discovered during regional exploration by the GSC in 1968. The properties remained idle until 2007 when AEI entered into a joint venture agreement with Roche Bay plc.

In November 2011, AEI released a NI 43-101–compliant inferred resource estimate for the Tuktu 1 deposit, estimating a resource of 465 million tonnes grading 31.1% Fe. In March 2012, AEI filed an updated NI 43-101 report for Roche Bay's C-Zone, with indicated resources estimated at 501 million tonnes averaging 26.35% Fe and inferred resources

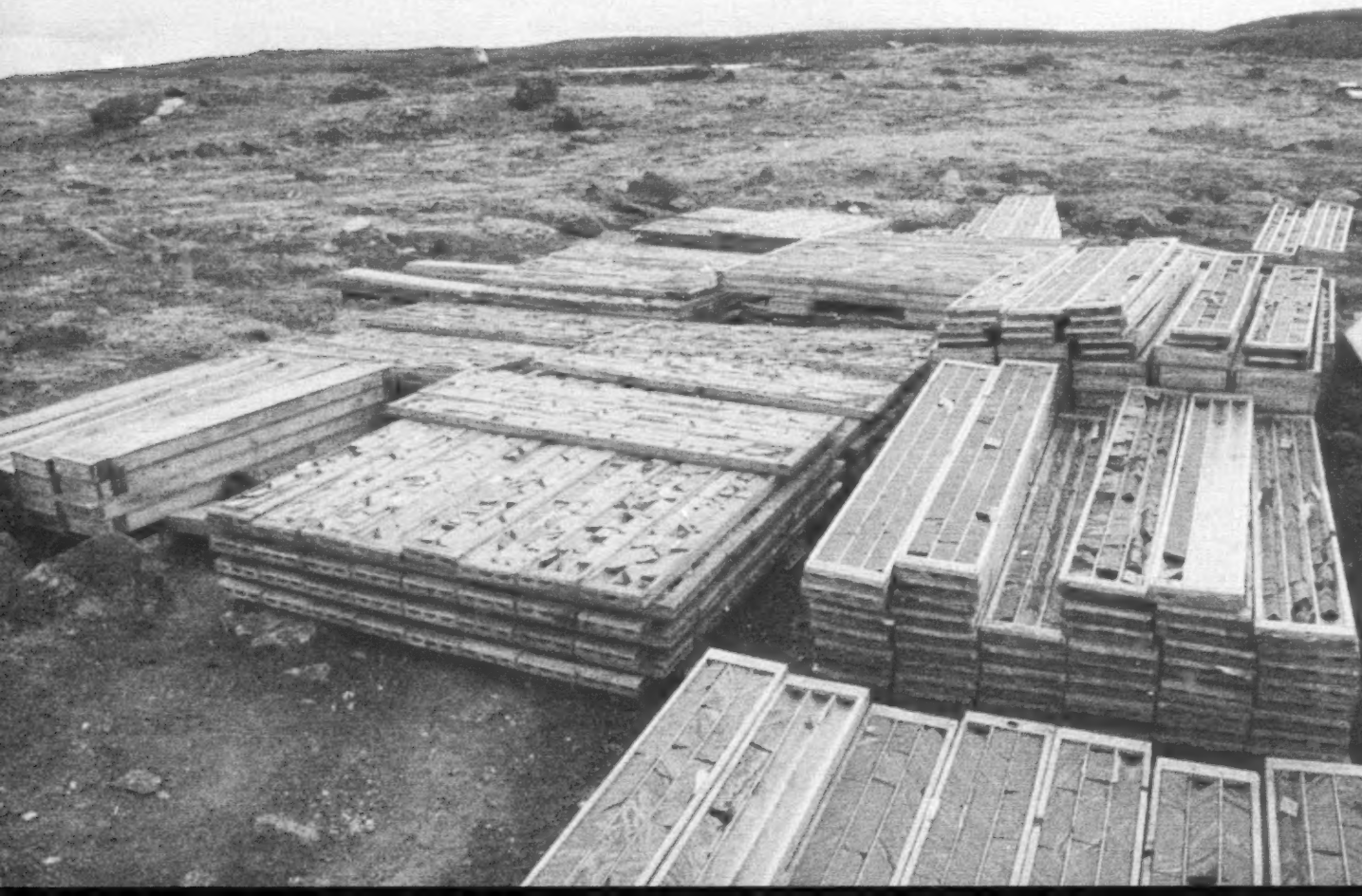
estimated at 66 million tonnes at 26.37% Fe. An initial estimate for part of the A/B Zone was included in the revised NI 43-101 report, and this inferred resource is estimated to contain 92 million tonnes at 24.64% Fe. This estimate for part of the A/B Zone is based on limited recent and historical drilling and is not representative of the entire zone.

Fieldwork was completed at both the Roche Bay and Tuktu properties in 2012. This work included geotechnical work to evaluate the potential for port facilities on the Roche Bay project, and additional sampling to follow up on high-grade results from Tuktu 2. AEI released assay results from early in the 2012 season that returned a best result of 69.3% Fe in a sample from the Tuktu 2 prospect.

In August 2012, AEI announced the completion of a positive definitive feasibility study on Roche Bay's C Zone. The study estimates a mine-life of 15 years for C Zone with an average production of 5.5 million tonnes of ore per year. Both the amount of ore produced and the mine-life could be increased once other potential deposits are evaluated.

The positive feasibility study and the high-grade results from Tuktu 2 led the company to conduct an accelerated drill program for the prospect. Sampling and drilling was undertaken later in the 2012 field season, with a total of 176 grab samples collected from various magnetic anomalies on the prospect and 1,536 m of diamond drilling completed. The company also discovered specular hematite at Tuktu 2; before this season, this style of mineralization had not been identified on the property.

Core storage at Tuktu camp
Courtesy of AEI



INACTIVE PROJECTS

The Qikiqtani region includes two past-producing base metal mines, both of which ceased production in 2002. The decommissioned **Polaris** lead-zinc mine is located on Little Cornwallis Island, northwest of the community of Resolute. The decommissioned **Nanisivik** zinc-lead-silver mine is located east of the community of Arctic Bay. Post-closure environmental monitoring continues at the two sites.

The **Allen Bay** and **Eleanor** copper-lead-zinc exploration projects, owned by ColtStar Ventures Inc., are located on Somerset and Cornwallis islands respectively. Eleanor was acquired in 2010, and Allen Bay in 2011. However, no work has been reported on the projects since the acquisition.

The **Aviat** diamond project, a joint venture project that is 90 per cent owned by Stornoway Diamond Corp. and 10 per cent owned by Hunter Exploration Group, consists of 12 known kimberlites on the northern end of Melville Peninsula. No exploration work has taken place on the project since 2008, although the company released new microdiamond results in March 2011.

True North Gems Inc.'s **Beluga** sapphire project is located near the community of Kimmirut on southern Baffin Island. The company completed a legal survey of the four claims that make up the property in 2011, but no exploration work was performed.

The **SQ-05** iron project, on the Belcher Islands, consists of one IOL parcel (subsurface rights) operated by McKinnon Prospecting Ltd. under an exploration agreement with NTI. The agreement was signed in 2010, and a site visit took place the same year, but no exploration work has been reported on the property.

Number	Project	Operator
BASE METALS		
726, 727	Allen Bay, Eleanor	ColtStar Ventures Inc.
728	Nanisivik Mine	Canzinco Ltd. (Breakwater Resources Ltd.)
729	Polaris Mine	Teck Resources Limited
DIAMONDS		
789	Aviat	Stornoway Diamond Corporation
GEMSTONES		
819	Beluga	True North Gems Inc.
IRON		
879	SQ-05	McKinnon Prospecting Ltd.

Please refer to the map on page 53 for the location of inactive projects in the Qikiqtani region.

Opposite page: Landscape shot, Hall Peninsula
Courtesy of NAAC

GUIDE TO ACRONYMS

AANDC	Aboriginal Affairs and Northern Development Canada
BIF	banded iron formation
BIPR	Bathurst Inlet Port and Road
CanNor	Canadian Northern Economic Development Agency
CCGP	Climate Change Geoscience Program
CNGO	Canada-Nunavut Geoscience Office
DEIS	Draft Environmental Impact Statement
DEW Line	Distant Early Warning Line
DPA	Development Partnership Agreements
EA	Inuit Owned Lands Mineral Exploration Agreement
EDT	Department of Economic Development and Transportation, Government of Nunavut
EM	electromagnetic
GEM	Geo-mapping for Energy and Minerals Program
GN	Government of Nunavut
GSC	Geological Survey of Canada
IIBA	Inuit Impact Benefit Agreement
IOL	Inuit Owned Land
IP	induced polarization survey
I-SPY	Independent Science Program for Youth
NI 43-101	National Instrument 43-101
NIRB	Nunavut Impact Review Board
NLCA	Nunavut Land Claims Agreement
NRCan	Natural Resources Canada
NTI	Nunavut Tunngavik Incorporated
NWT	Northwest Territories
PEA	Preliminary Economic Assessment
PGE	platinum group elements
REE	rare earth elements
RIA	Regional Inuit Association
VMS	volcanogenic massive sulphide
WZSOS	West Zone South of Shaft, Lupin property

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AREVA Resources Canada Inc.

674 **Kiggavik** (47)

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Aura Silver Resources Inc.

401 Greyhound Lake (34)

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731 Vesle Fiord (55)

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100 Hackett River (20)
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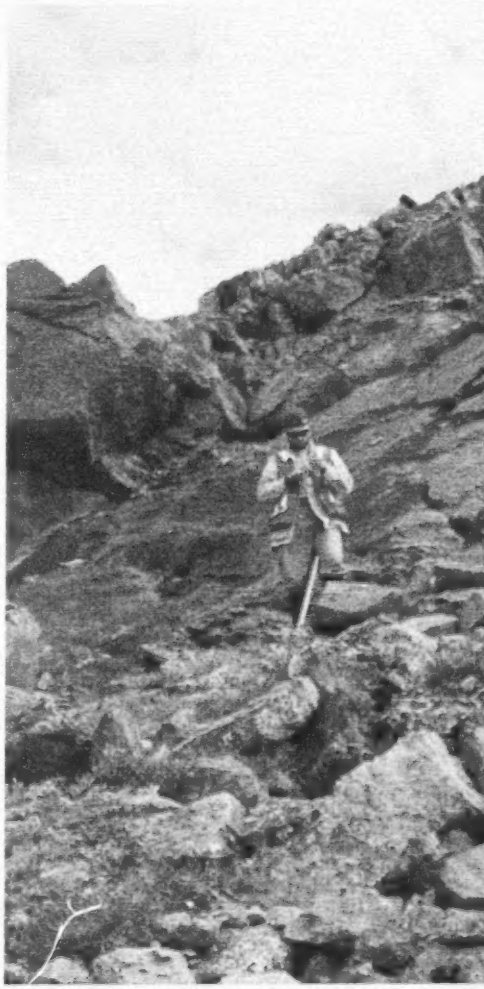
Geologist, Hall Peninsula
Courtesy of AANDC



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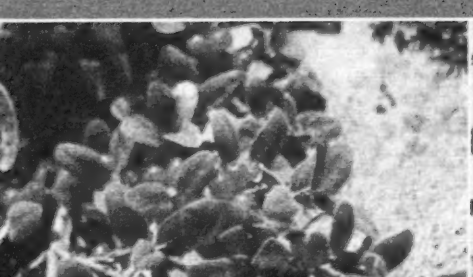
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